

OCTOBER 1916 NO 130

Monthly

A Reference for Buyers

HITCHCOCK'S  
**MACHINE  
TOOL LIST**

Distributed Free to Machine Tool  
Users Everywhere in the United States and to  
Dealers in American Machinery Abroad

Published by  
**A·H·HITCHCOCK**  
1220-1235 Caxton Building  
Chicago

# HISEY Electric Drills and Grinders



Combination Internal and External Grinder  
Two Sizes,  $\frac{1}{4}$  and  $\frac{1}{2}$  Horse Power

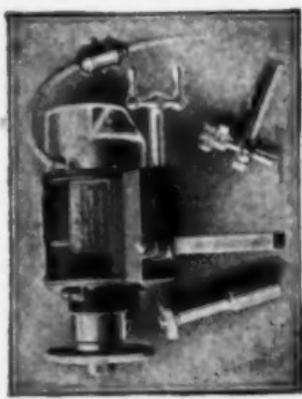
Most Complete Line of  
Portable Electric Tools

*Write for Catalogue H*

The  
**Hisey-Wolf Machine Co.**

Cincinnati, Ohio

New York Office, 50 Church St.



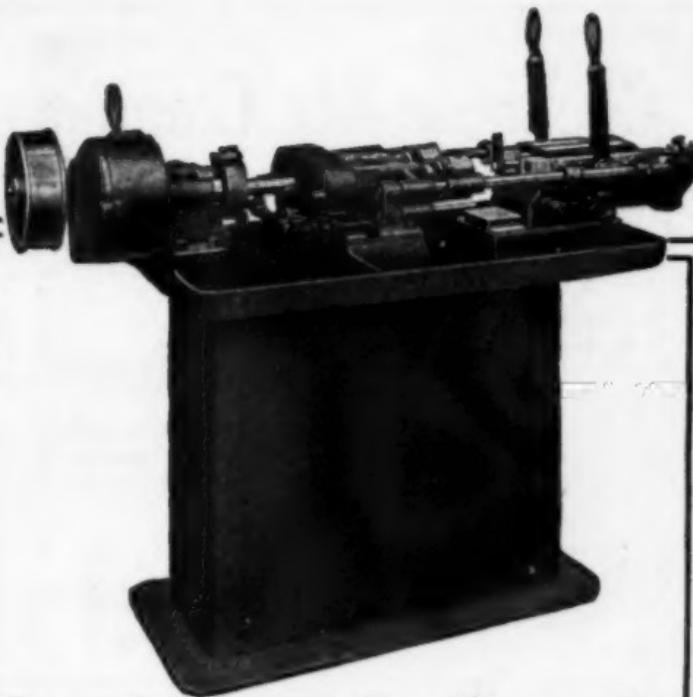
Tool Post Grinder  
Ten Styles and Sizes



"Hisey" Hand Drill  
Eight Styles and Sizes



Angle Plate Grinder  
Five Sizes  $\frac{1}{4}$  to 3 Horse Power



### **Boosting the Profits with the NAMCO Bolt Threader**

The NAMCO Semi-Automatic Bolt Threader means more in output and less in daily operating cost.

It is a simply constructed machine solid from the floor up and will give the utmost of service on your thread cutting work.

The two spindles enable operator to produce an almost constant stream of product, and the NAMCO Dies, which are regular equipment, insure clean cut, accurate threads continuously.

Cut Production Costs with a NAMCO Bolt Threader—it's a sure way of Boosting the Profits.

**Ask for NAMCO Dix Book "C" for detailed information.  
Sent free upon request.**

**THE NATIONAL-ACME MFG. CO.**  
NEW ENGLAND PLANT Cleveland, Ohio  
WINDSOR, Vt. CANADIAN SCREW PLANT  
MONTREAL, P. Q.

### *Branch Offices*

**WAREHOUSES—NEW YORK CHICAGO FOREIGN REPRESENTATIVES**

*Makers of Gridley Single and Multiple Spindle Automatics at Windsor, Vt. Also Acme Automatics, Threading Dies and Screw Machine Products at Cleveland, Ohio.*

# Cochrane-Bly Company

Rochester, N. Y., U. S. A.

*Manufacturers Of*

## Metal Sawing Machines

Made in five sizes, to cover every manufacturing requirement. Their thin milling saws combine high speed with the closest economy in high-priced steel.

## Automatic Saw Sharpeners

Made in two sizes, for saws up to 15<sup>8</sup> and 24<sup>8</sup> in diameter. They grind and bevel at one operation the high and low tooth type milling saw.

## Die Filing Machines

Made in two sizes, for the accurate filing of dies, punches, metal patterns, jigs and special gauges, and for filing duplicate parts requiring a close finish.

## Universal Die Shaper

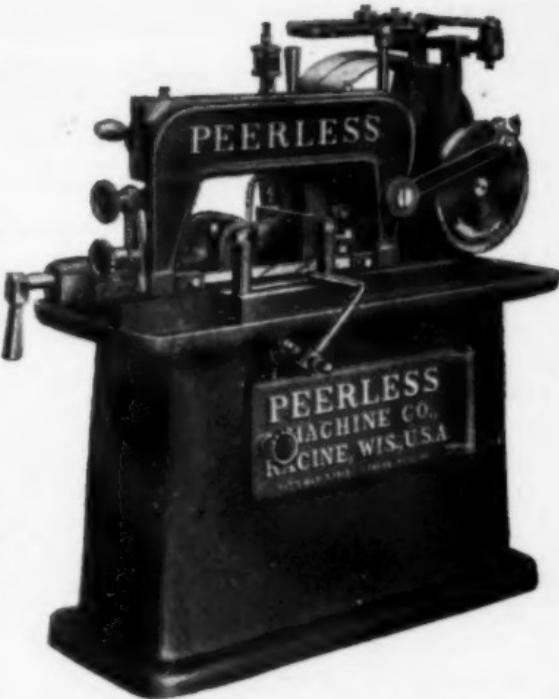
For die making and general tool room work. Operates both shaper ram and milling spindle at any angle.

When considering this class of equipment,  
would appreciate being consulted.

# Shell Steel Cutting Time

on the

## PEERLESS High Speed Heavy Duty Metal Cut- ting Saw.



Owing to the toughness of this material it was selected for cutting time, and under extreme feed the actual time on cutting 5 in. round is  $7\frac{1}{4}$  min. Regular stock blade was used,  $12 \times \frac{3}{4}$ , 18 gauge, 10 pitch.

A machine that will stand up for such heavy duty work must be properly designed and rigidly constructed, and to stand the wear and tear the right grade of material and workmanship must be embodied, and that is just what you will find in the PEERLESS High Speed.

As a real time saver in operating and adjusting, it is in a class by itself. For an example, more than six cuts per minute can easily be made on  $\frac{1}{2}$  in. round cold rolled steel bar. This means in ten seconds —opening the vise, moving the stock ahead, closing the vise, starting the machine, cutting off stock, and stopping machine. Can you beat it? If you doubt it we would be glad to prove it. The PEERLESS not only saves time but also increases production.

Again we say, the actual time saved in operating and adjusting the PEERLESS High Speed is a big item that is well worth investigating.

Again we suggest, before considering any other cutting-off equipment, write us for a complete description.

**Peerless Machine Co.**  
**1609 Racine St., Racine, Wisconsin**

# Cheap, Quick Cutting

Of high speed or other hardened steel, copper, aluminum and all other metals, or wood and metal combined, with the rapid

## Peter Bros. Abrasive Metal Cutter

Cuts smoothly, saves waste of material and time, and is altogether the most satisfactory cutting method yet devised. Pays its own cost in a short time.

### 8" Size, \$17.50, with C. S.

Splendid for tool room. Cuts high-speed steel up to 8" square.

### 12" Size \$44, with C. S.

Cuts up to 2 $\frac{1}{2}$ " diameter, round or square, at any angle up to 45 degrees. Ball bearing.

**15 Days' Free Trial**

Write us or ask your dealer

**PETER BROTHERS MFG. CO.**  
115 Railroad St., Algonquin, Ill.



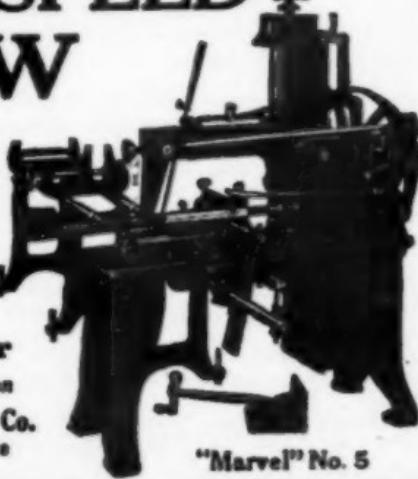
# AUTOMATIC HIGH SPEED SAW

Attention is invited to the "Marvel" No. 5  
Cuts duplicate pieces faster and at less cost than any other method. Entirely automatic.

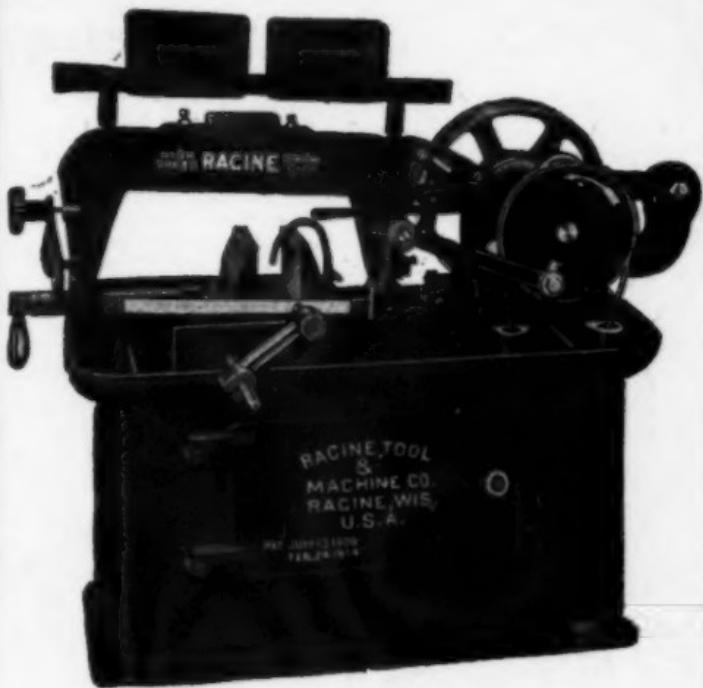
### Feeds the Bar

Write for full information

**Armstrong-Blum Mfg. Co.**  
341 N. Francisco Avenue  
Chicago, Ill.



"Marvel" No. 5



## Why Is It

That so many large shops are now equipped and being equipped with

**The Newly Improved Racine High Speed, Metal-Cutting Machine?**

FOR MANY GOOD REASONS—among others—because for speed, accuracy, economy and ease of operation THE RACINE cannot be surpassed. You MAY NEED ONE NOW. We will send a RACINE on any trial basis that is fair. WRITE US or any good dealer.

**Racine Tool & Machine Co.**

1500 Junction Ave. S., Racine, Wis., U. S. A.

## Economical Work on Small Lathes



New Dalton 6-in.  
Actual Swing 7½-in.

Although these sturdy lathes are designed primarily for small, accurate work, they have the power and strength for work often done on lathes three to four times their size.

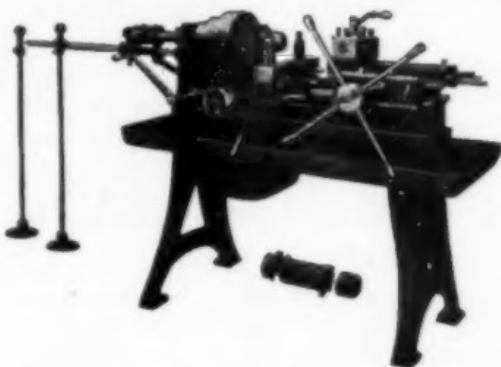
Why tie up a 14" to 20" lathe on jobs that can be done to better advantage on a Dalton 6"?

Screw cutting 3 to 144 per inch. Electric drive, power driven or foot power. Furnished also with standard high legs or in the bench type.

*Write for Bulletin B-602*

**DALTON MACHINE CO., Inc.,** 1910-15 Park Av., NEW YORK

## Turret Lathes and Screw Machines



built and designed to give maximum permanent accuracy and efficiency. Reasonably priced.

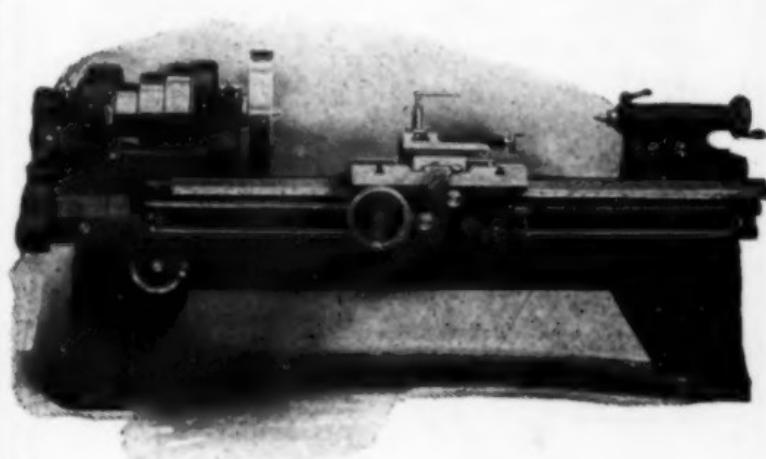
**Himoff Machine Co., Inc.**  
134 Mott Street, New York, U. S. A.

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# **WALCOTT LATHES**

Made in 14, 16, 18, 20, 26 and 28" sizes



**For  
Tool-Room and  
Factory**

**Walcott Lathe Co.**  
Jackson, Michigan

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## You Are Wasting Time!

If you are paying a man to swing a sledge on your light tool dressing, miscellaneous forging and blacksmithing, cut out that expense now by installing a Barr pneumatic light forging hammer.

The cost is small! The results in time saved and production increased will please you.

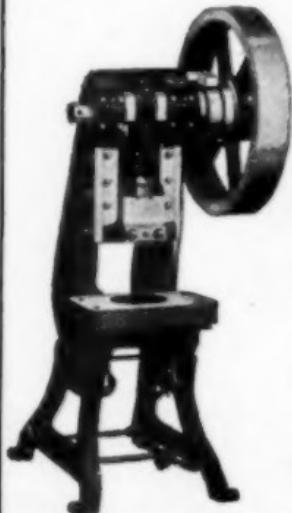
*Write for Circular 10 H*

**H. Edsil Barr, Mfr.  
Erie, Penna.**



## Here Is A Press

With Plenty of Steam  
Back of THE PUNCH



**HIGH DUTY  
ROCKFORD  
PUNCH PRESSES**

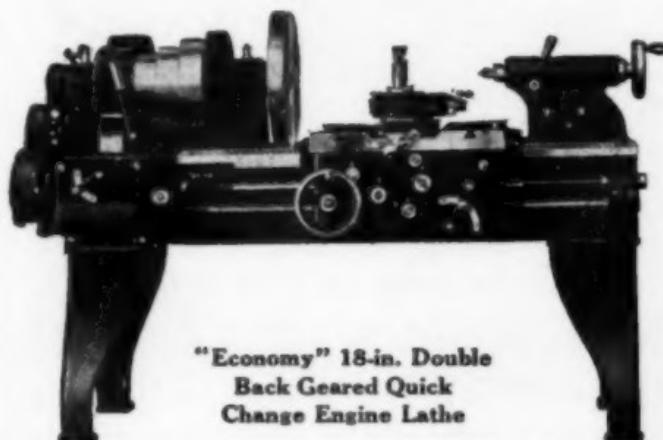
Made in straight side and inclinable types. Their great power backed by rigid design enable them to do the work you demand and stand up to it.

*Write For Catalog*

**Rockford Iron Works  
Rockford, Ill.**

# **"Economy" High Duty Lathes**

## **For the American Market**



**"Economy" 18-in. Double  
Back Geared Quick  
Change Engine Lathe**

Now is the time when manufacturers of mushroom tools must reap their profits wherever they can get them, for when the war is over they will go into the discard unmourned.

This is also the time when manufacturers of tools of special merit are placing their product where they must look for permanent business when the buyers will not have to accept what they can get but will be able to take their pick of the market.

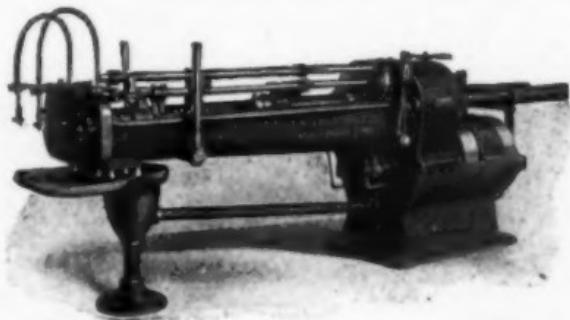
That is why we have not accepted a foreign order for nearly two years—why we have quietly placed "Economy" Lathes in good shops throughout our own country, for we know that on their strict merit they will give us such a hold on a good share of the trade that no competition can shake it.

That is the kind of a lathe you need in your shop. And while we are unable to fill even the domestic demand for "Economies" just now, even with a greatly increased capacity, we would like to get in touch with a few more good concerns who are in position to anticipate their lathe needs.

*We shall give our very best attention to your inquiry*

**Rockford Lathe & Drill Co.**  
**1827 Fourteenth Ave.,**      **Rockford, Ill.**

## **Broaching Machines And Broaching Tools**



### **Our Famous Double Machine**

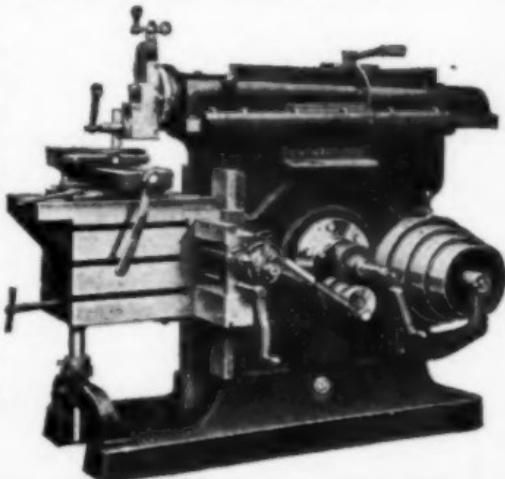
The Most Complete Line In The World. We make our machines in 5 sizes and 11 types. *Send for particulars.*

**THE J. N. LAPointe CO., - - - New London, Conn.**

## **SHAPERS**

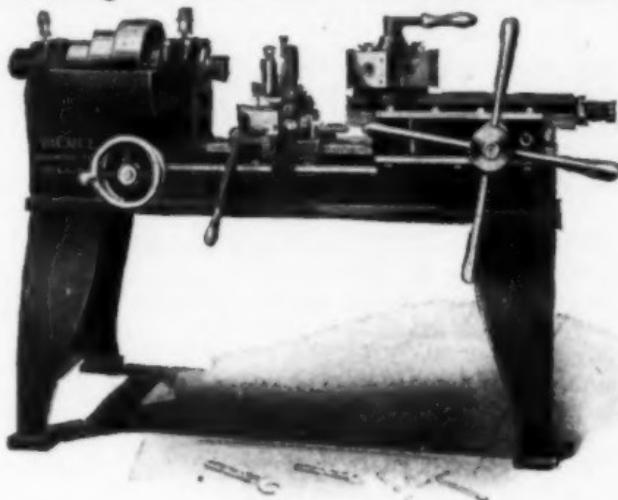
12", 14", 16"  
Plain Crank,  
16", 20", 25"  
B. G. Crank,  
either Cone  
Driven or  
through  
Speed Box.

24", 28", 32"  
Gear ed  
Shapers of  
the Belt Shift  
type.



**The Smith & Mills Co.** Station B.,  
Cincinnati, O., U.S.A.

Pierce 14" Rapid Production  
**Heavy Pattern Turret Lathe**



WE ARE CONFIDENT that after a close inspection you, too, would classify this Lathe as an advanced product—ahead-of-date in many respects.

It is designed and built for big production, and embodies the requisite accuracy, convenience and rigidity. Made by experienced workmen, of the highest quality of materials thruout. We now use the best grade of white metal obtainable for the bearings.

This Lathe is especially adapted for rapid production in manufacturing cast iron and brass goods requiring several operations to finish the part—such as automobile and gas engine parts, gear blanks, globe valves, etc. Every machine is backed by our guaranty.

*We invite careful comparison because we know our machine.  
No trouble to answer your request for full information.*

**Pierce Machine Tool Co.**  
617 W. Jackson Blvd., Chicago, Ill.

# 2200 Degrees or 1700 Degrees

Which Is Better for High Speed Steel?

Heat-treating high speed steel the old way, at a temperature of 2200 Fahr., necessarily results in many failures and much loss from pitting, breaking or distortion. If you are handling high speed steel in this way, these losses amount to a substantial sum. By using



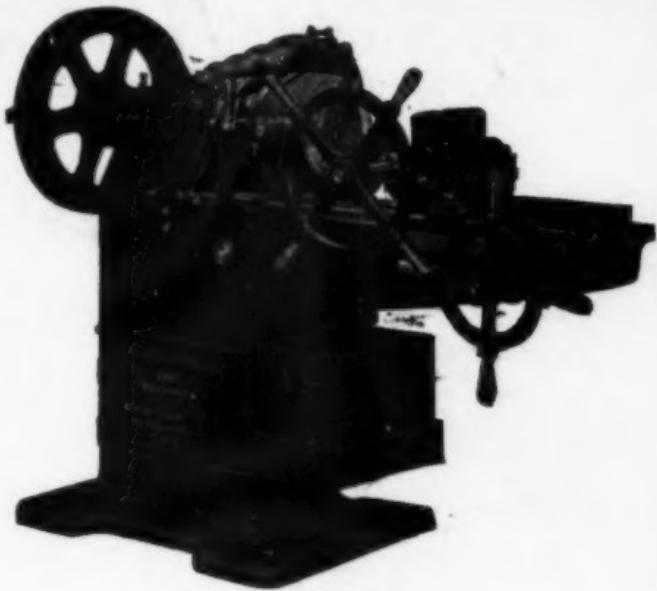
at a temperature of only 1700 degrees Fahr. you not only avoid any loss, either from distortion, breaking or pitting, but you can do all your tempering and hardening with ordinary, unskilled labor, saving the waste of material as well as the high price you pay for special skill.

## We Stand Ready to Prove It

You can have 30 days to demonstrate the material and the process in your own plant, on your own work and with your own men. We are glad to assume all the apparent risk, because we know that actually there is none. If you use HETZY once, you won't heat-treat high speed steel without it.

*This Is Good Enough to Investigate  
Write Now for More Facts*

Bennett Metal Treating Company  
Elmwood, Conn.



## Reliance Bolt Cutters

Built in sizes  $\frac{3}{4}$  inch to 6 inches, Single, Double and Triple, of the most up-to-date design. There is, also, a good reason why the "Reliance" is such a satisfactory machine for accuracy of threads cut, large production and low cost of maintenance, even in the hands of inexperienced labor. A lot of this reason is in the Opening Die Head, and we would like to tell you all about it. Interesting information for the asking.

**The Foote-Burt Co., Makers**  
**Cleveland, Ohio**

# Pattern Shop Machinery

Special Prices if you refer to this ad.



## Band Saws

Chicago No. 00 27 in. Wheels  
" No. 0 32 " "  
" No. 1 36 " "



## Saw Tables

Chicago No. 5 Stationary Table  
" No. 9 Tilting Table  
" No. 10 "

Boring attachment if wanted.



## Jointers

8 in., 5 and 6 ft. tables and guard.  
12, 16, 20, 24 and 30 in., 7 ft. tables  
and guard.

Trimmers, Lathes, Core Box Tools, etc.

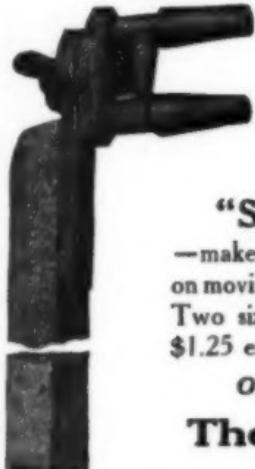
*Ask for full descriptions*

## Chicago Machinery Exchange

1214-1228 Washington Boulevard, Chicago

# Prevent Pulley Accidents

By Making Them Impossible



No matter how much or how little your workmen may be hurt, and no matter how much or how little accidents cost, it is both better and more comfortable not to have them happen at all. The—

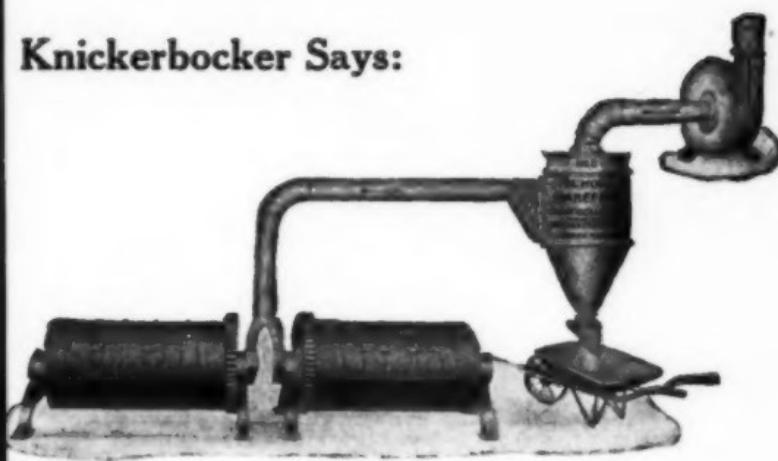
## "Safety First" Belt Stick

—makes accidents impossible in putting belts on moving pulleys. The hook can't get caught. Two sizes, 1 to 4" and 4 to 6", at one price, \$1.25 each or \$12 a dozen.

*Order a few on approval—now*

**The Ready Tool Co.**  
Bridgeport, Conn.

**Knickerbocker Says:**



## **They Are Still Buying**

### **Morse Dust Collectors**

In the last few months we have received more than 70 repeat orders, nearly all from firms of national reputation. We give a list of a few of our customers:

Weston-Mott Co., Flint, Mich.,.....	12
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.....	10
Willis-Overland Co., Toledo, Ohio.....	10
Oliver Chilled Plow Works, South Bend, Ind.....	9
Pittsburgh Plate Glass Co., Pittsburgh, Pa.....	9
General Electric Co., Schenectady, N. Y.....	7
Fort Wayne Electric Works, Fort Wayne, Ind., .....	5
Sutton, Steele & Steele, Denver, Colo.....	5
Buick Motor Co., Flint, Mich.....	4

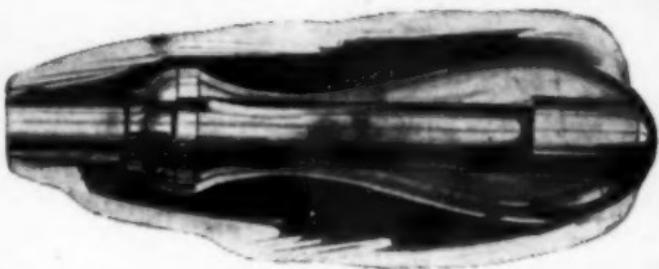


They ordered the Morse "Rarefied," and are sending in their repeat orders, because of its exceptional merit. Let us tell you about its efficiency and remarkable economy.

*It's worth many dollars to you.*

**The Knickerbocker Co.**

Jackson, Mich.



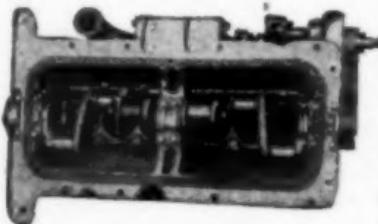
## Quick Action

This is what we call this new Machine Handle. Attached to any power tool, especially the heavier types; adjustments are made with more speed and less effort.

All kinds of standard and special Handles from steel for power tools and similar purposes.

*Send for Catalogue and prices.*

**The Cincinnati Ball Crank Co.**  
Oakley, Cincinnati, Ohio



**Vul-Cot Fibre**  
**GASKET FOR**  
**CRANK CASE**

VUL-COT Fibre is an exceptional gasket material for the gear boxes on lathes, millers and other machine tools which have change-speed devices.

VUL-COT Fibre does not stretch or shrink, won't tear, and is almost proof against cracking—so it can be used over and over again even if the case is dismantled frequently.

All information on this and many other uses of VUL-COT Fibre will be gladly supplied upon request.

**AMERICAN VULCANIZED FIBRE CO.**  
560-570 Equitable Bldg., Wilmington, Delaware

*Complete stock for immediate shipment at Chicago*

**Vul-Cot Fibre**



## If You Use **BUSHINGS**

In large or small quantities you'll be interested in our products and prices.

For the large user we offer unexcelled quality and quick delivery in finished bushings of all types and sizes.

For the small user such as automobile repairers who only need a few bushings occasionally there are our Velvet Cored Bronze Bars from which any standard bushing of the finest quality can be turned up at a few moments notice.

*Write us today—tell us your needs. Address Dept. H.*

**JOHNSON BRONZE COMPANY**

Formerly The American Car & Ship Hwy. Mfg. Co.

NEW CASTLE, PA.

# Easy Work for a Canton Crane

Is Hard Work for 6 to 10 Men

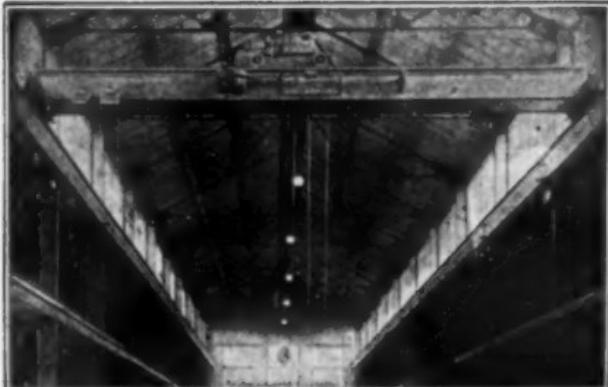


Why not use a Canton Crane for the lifting and lugging of your heavy machinery and castings? It does the work quickly and safely, saving money, time, muscle and temper.

"The Handiest Tool in the Shop" is made in several sizes, and double gears are furnished at small extra cost.

*A 30 day trial for the asking*

CANTON FOUNDRY & MCHE. CO., Canton, O.

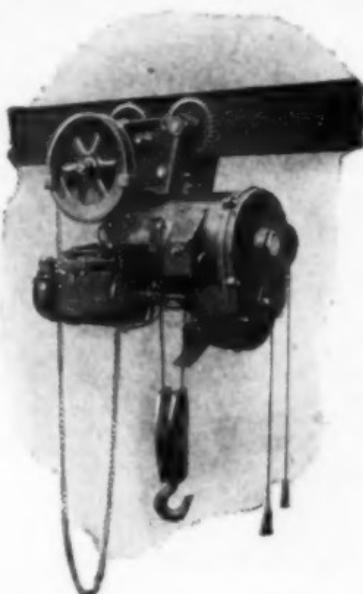


## Floor Operated Electric Traveling Cranes

do not require an operator in constant attendance and are frequently as well or better adapted for handling material than the more expensive cab operated.

We make all types of overhead cranes and hoists.

The Euclid Crane & Hoist Company  
Euclid, Ohio



**A type "U" Hoist** in your plant  
**will replace from 10 to 15**  
**laborers—and it will pay for**  
**itself in less than 90 days.**

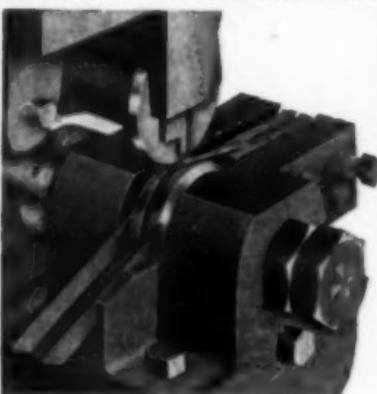
*Built in sizes from  $\frac{1}{2}$  Ton to  
6 Ton capacity.*

We'll be glad to mail you Bulletin 301-BH and prices.

**PAWLING & HARNISCHFEGER CO.**  
**MILWAUKEE WISCONSIN**

## The New Gray Sheet Metal Cutter That Is Not a Rotary Shear

It will cut sheet metal or steel plates to 3-16" in any shape without springing or buckling the sheet, as a shear does, and leaving both sides of the cut in perfect form and with smooth edges. Cuts inside angles, corners and curves at one operation, following easily and rapidly an exact line. A reciprocating vertical cutter takes out a thin kerf, working in metal much as a jigsaw works in wood—a highly interesting process. The saving which the Gray cutter effects in time, trouble and in stock puts it in the class of machines that quickly earn their cost. It is not an investment long, because its earnings soon pay for it, but it is an asset, and one of large earning capacity.

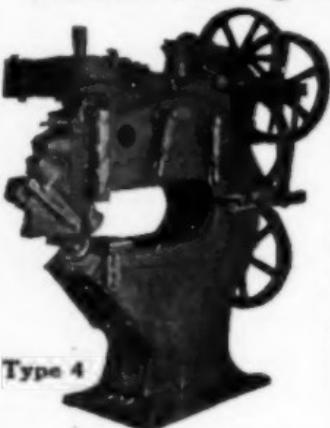


How shall we address an interesting circular we want to send you?

*Please advise promptly*

**W. J. Savage Co., Inc.  
Knoxville, Tenn.**

## Cuts Irregular Curves, Discs or Circles Without Cutting in from Side of Sheet



Type 4

Type 4 "Quickwork" Rotary Shear cuts  $\frac{1}{8}$ -in. thick steel and lighter to  $4\frac{1}{2}$ -in. radius in reverse curves, or 9-in. diameter hole. Follows any serpentine or sudden changing lines on one passage. Leaves metal true and flat. This

### "Quickwork" Rotary Shear

has three changes of speed, instantly controlled by lever. Upper cutter raised and lowered by power. Depth of throat 30-in.—weight 4000 pounds. Saves 5 to 40% stock. Saves 90% labor. "Quickwork" Rotary Shears are made to cut 16 gauge to  $\frac{1}{8}$ -in. steel. Sold on trial—fully guaranteed.

*Write today for sample cuttings,  
complete descriptions and prices.*

**H. Collier Smith 815 Scotten Ave.,  
Detroit, Mich.**

Makers of the "Quickwork" Line of Metal-Working Machinery



### **Nos. 1, 2 and 5 Shears and Rod Cutter**



### No. 3 and 4 Shears

**Send for Shear Catalog**

**Manufactured and For Sale By**

**W. C. & F. C. TUCKER, Hartford, Conn., U.S.A.**

## **Hercules** Shears and Rod Cutters

**Shear blades** have a draw-in cut with no tendency to crowd work out of shear. Pressure is directly over the cut by a rolling contact. Arm of movable blade is operated with a steel band. No springs on the machine.

The Improved Rhodes  
**Combined Shaper and Slotter**

A 2-in-1 Tool  
At a Low Price  
For Small Work

With Vertical Attachment, as shown, it is a real vertical and horizontal machine.

Built like a big machine tool.

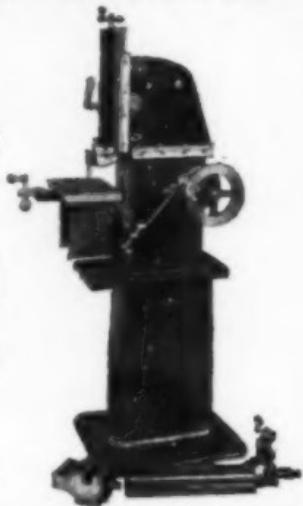
But it costs less.

Wonderfully efficient and economical in shaping and slotting light work—in making tools, dies, models, etc., etc.

An economy tool in price and in operation.

*Write for full description*

**Rhodes Mfg. Co.**  
Hartford, Conn.



**A Wonderful Combination  
In Riveting**



**Speed:** one rivet per second.  
**Uniformity:** each rivet headed with same degree of tightness or looseness as desired.  
**Finish:** perfectly formed rivet heads, highly polished surface, no hammer or tool marks shown.

Grant Noiseless Rivet Spinning Machines, are the only machines built that will accomplish the above.

*Catalog?*

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.



For your machine tools you need an easy way of changing cutting speeds to suit all sizes and kinds of material. The simplest and surest way of getting just the speeds you want is by applying

## **Reliance** *Adjustable Speed* **Motors**

These motors run at any speed with a constant horse power output over any range up to 1 to 10. To change the speed just turn the hand wheel—no electric controller is needed.

*Get the details in Folder 10 L  
(We build constant speed motors.)*

**Reliance Electric & Engineering Co.**  
1050 Ivanhoe Road, Cleveland, O.

# Combination Disc Grinder & Roll Sander

"Best machine ever built for pattern shop use"

The No. 20 Gardner combines both the disc wheel and the sanding roll into a compact, sturdy and accurate machine. The disc wheel is used for producing flat surfaces and external curves; the sanding roll perfects internal curves which have been roughed out on a band saw.

Both this disc wheel and the roll remove stock with extreme rapidity and accuracy. With this machine at hand your apprentice boy can do, with greater speed and quality, much of the work formerly done by your best man. A Gardner No. 20 soon pays for itself in any modern pattern shop working four or more men.

Patented



*Get the details today*

**Gardner Machine Co.**

*The Disc Grinding Authorities*

Beloit, Wisconsin

Largest Disc Grinder Builders in the World



The

*Greenfield*

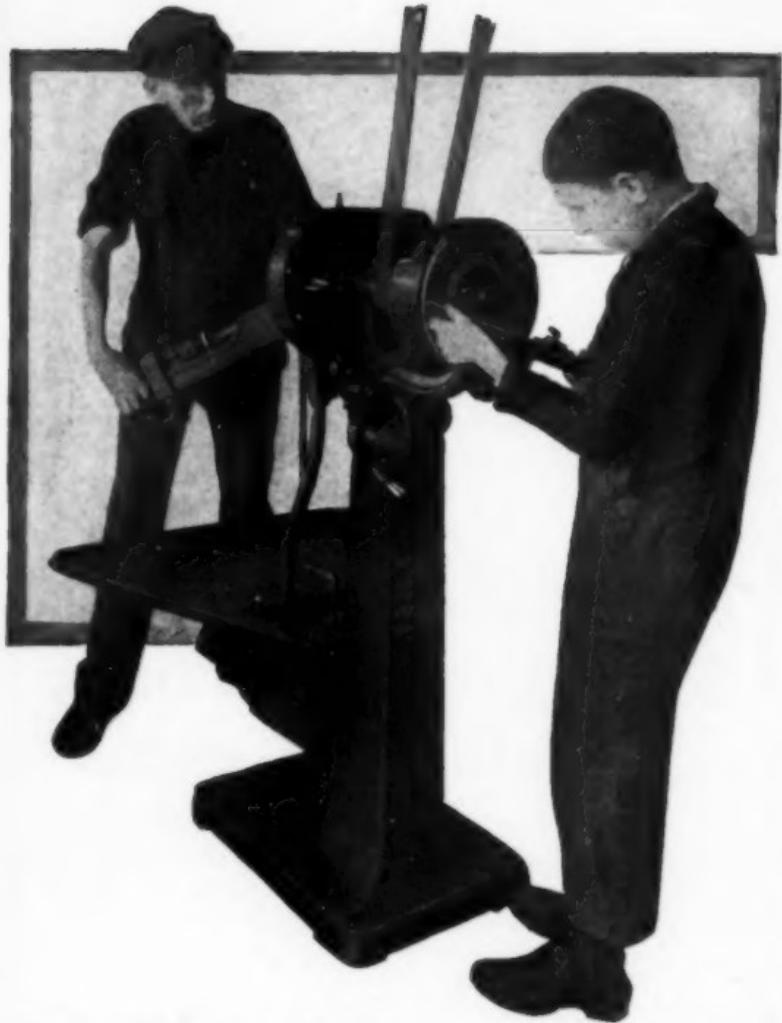
## For Special Work, Tools, Jigs, etc.

This Universal Grinder is just the machine needed in many of the shops engaged in equipping for the manufacture of special lines. It is an all-around grinder and will handle about any kind of a job that comes within its range.

It will turn out accurate, dependable work. Also, we believe we are perfectly correct in stating that we furnish this machine with a larger and more complete set of attachments than can be had for any grinder selling at anything like the same price.

*We also build Plain Grinding Machines for production work*

**Greenfield Machine Company**  
**Greenfield, Mass., U. S. A.**



## Style WPL New Yankee Drill Grinder

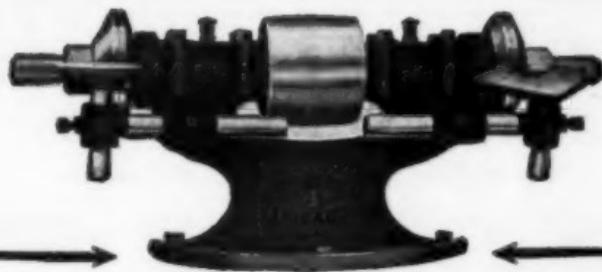
(Capacity, No. 60 to 2½")

Any BOY in your shop can grind a drill better and quicker on a new Yankee than your most skilled mechanic can do it by hand.

*Catalog on Request*

**Wilmarth & Morman Co.**

2185 Monroe Ave., N. W.      Grand Rapids, Mich., U. S. A.



## Grinders and Equipment

For Greater Efficiency In Your Shop

Have You Ever Considered how one of these inexpensive machines, conveniently placed in your factory, would soon pay for itself in the time and steps it would save your workmen?

I Make a Complete Line of efficient and durable bench and floor emery grinders to carry 3-inch to 20-inch grinding wheels. Also polishing machines, and combination grinding and polishing machines. Some with plain bearings, others with wick oiling bearings, and the best have ring oiling bearings.

Send a Trial Order and examine the machines at your leisure. If not thoroly satisfied with them in every respect, you can return them at my expense.

*See your dealer, or write direct to me about*

Emery Grinders

Lathe or Hollow Mills

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CHICAGO

# Allen Safety Set Screws

Any Length Point or Thread.

We make a specialty of short lengths.



Allen Socket Cap Screws

Are neat in appearance  
and exceedingly strong.  
A big improvement over  
the slotted head type.



*Send for circular No. 13 and sample screws*

**ALLEN MFG. CO., - Hartford, Conn.**

Peoples Life Insurance Bldg., Chicago, Ill.

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## High Grade Steel Bearing Balls

Accurate to 2-10,000<sup>th</sup>—Highly Finished



In Sizes  $\frac{1}{8}$  to  $\frac{1}{2}$ -Inch

Produced on our own perfected special machinery for the finest bearings, or in any grade desired, at moderate prices. Glad to quote you now on any quantity, and in any size.

**The Abbott Ball Company**  
Elmwood District, Hartford, Conn.



# RADBORE HEAD

Maximum  
Accuracy

Minimum  
Cost



Why try so hard to avoid square and rectangular holes in your work, when this tool will drill them quickly, accurately, and cheaply.

We find that very often a designer will substitute a round hole with a keyway when a square hole would give decidedly better results, simply because he fears the complications formerly involved in square hole work.

Our attachments are made to avoid these complications by drilling a perfect square or rectangular hole, either entirely through, or leaving a perfectly smooth flat bottom in the material.

The use of the Radbore Head obviates all strain or injury. It simply drills the hole desired in the same manner as an ordinary twist drill.

If you are contemplating work of this sort, consult our engineers whose services are at your disposal without charge.

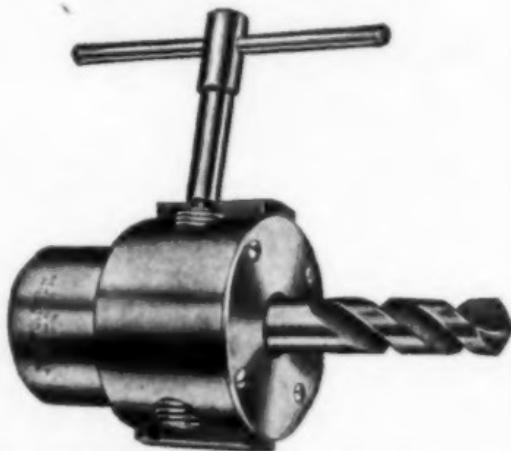
*Send for our new booklet—it is interesting.*

**Lawson & Company, Inc.**  
90 West Street, New York City

# *The* **Union Drill Chuck**

Has Many Good Points to Recommend It.

It is an Accurate Chuck and All Parts  
Are Strong and Durable



The jaws and operating screw are made of a high grade of tool steel, specially selected for its wearing qualities. In addition the Chuck is provided with a positive drive feature, which if properly used will prevent the drill from slipping and add to the life of the Chuck.

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New York Office,  
26 Cortlandt St.      New Britain, Conn.

Makers of a Complete Line of Chucks

# Thor

Long Stroke Riveting Hammer



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Driving the last rivet on the Equitable Building in New York City. This completed one of the most difficult riveting jobs ever attempted, and is one more example of the great power, speed and durability of the Thor Hammer.

Thor Tools Ready for Immediate Delivery

**Independent Pneumatic  
Tool Company**

Chicago      New York      Pittsburgh      Detroit  
San Francisco      Birmingham      Montreal



*We manufacture a great variety of*  
**Lathe Chucks, Drill Chucks, Centering Chucks**  
Also  
**Portable Jaws for Lathe face plates and Machine tables.**

*Let us send you our Catalog*

**The Cushman Chuck Co.**  
*Established 1862*      Hartford, Conn.

Why are you invited to inquire into  
**Sweetland Chuck Service?**



Because it offers you something worth while.

**HOGGSON & PETTIS MFG. CO., New Haven, Conn.**

# SKINNER

## Independent Lathe Chucks

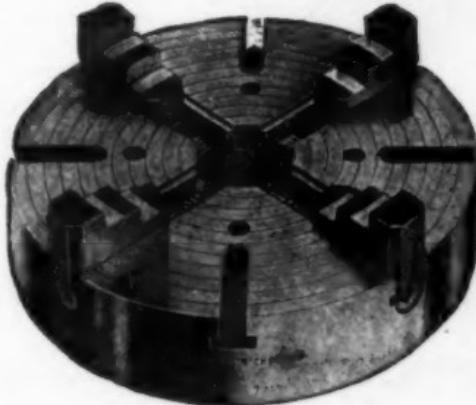
### Iron and Steel

Fig. 900

Fig. 1900

### Bodies

With Solid Reversible Jaws  
Hardened Steel Bearings



### For High Speed Work

*The last word in chuck construction.*

Wide jaws; hardened steel thrust bearings; adjusting screws of large diameter, threaded full length; jaws ground after hardening, etc.

*Descriptive matter and new prices on request—  
Write us today*

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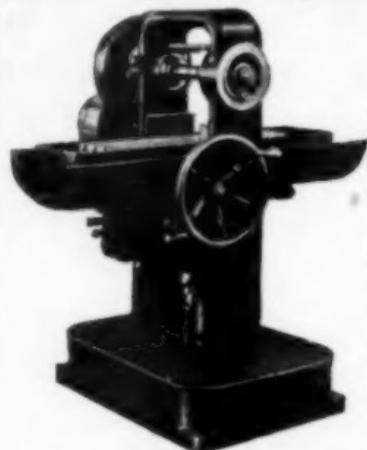
Factory and Main Office, New Britain, Conn.

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149 Queen Victoria St.

## A Radical Departure In Millers



*It is unique as a cost reducer. Write for details.*

**GOOLEY & EDLUND, Inc., Cortland, N. Y.**

**Briggs High Duty for  
Form and Gang Milling**

on steel parts for automobiles, guns, etc. A milling machine that will best do that kind of work is also mighty handy to have around any first-class machine shop.

It takes wide cuts in hard steel to the full power of a 3½-in. double belt, without tendency to chatter. It excels in rigidity, power and convenience.

## The Jacobs Improved Drill Chuck



Patented Sept. 16, 1902

*Manufactured by*

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# A LINE: Of "Burke"

**Millers**

80 lbs. to 1200 lbs.

**Tappers**

0" to  $\frac{5}{8}$ "

**Drills**

0" to  $\frac{3}{8}$ "

Superior  
Machine Tools  
are accurate,  
seasoned and  
durable.

*Ask  
for Catalogue*

The Burke Machine Tool Co.  
Conneaut, Ohio

# Rearwin Die Filing Machines



*Increases the Output  
Decreases the Cost*

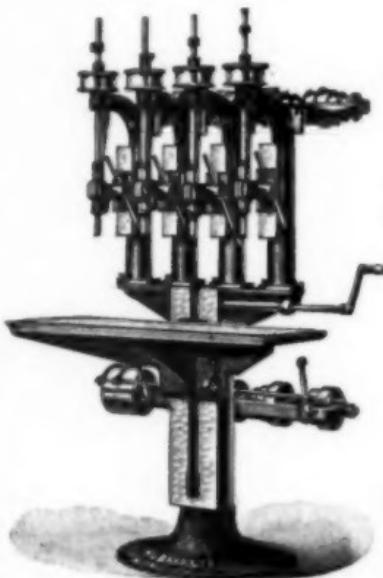
Does both large and small work. Any standard file 4" to 12" in length can be used. Stroke adjusted from 1" to 7". File releases on up-stroke. Shaft or motor drive gives rapid production and a uniform degree of clearance in your dies or other work where straight filing is required. Hack saws can be used for making templets.

**Adjustable Speed Stroke & Table**

*Descriptive circulars and  
prices sent on request.*

**W. D. Rearwin**

341 Mill Ave., Grand Rapids, Mich.



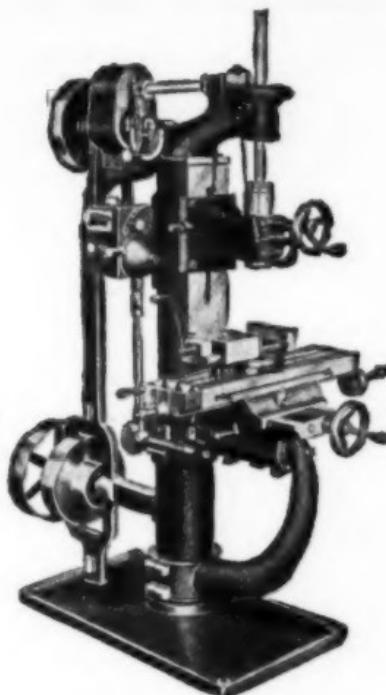
The Well Known  
**H. G. Barr Line**  
of  
**Sensitive Drills**

with one to six  
spindles.

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## Mill, Bore and Drill at Any Angle With Only One Setting of the Work

Knight Milling and Drilling Machines save from 20 to 50% of time on hard machining of all kinds in the tool room, experimental department and shop. In convenience they are equal to two or three ordinary machines.

### Our Light Duplex Miller

is especially adapted to the accurate and economical milling of such work as frames of typewriters, adding machines, cash registers, etc., where lugs occur in pairs and are to be finished on opposite sides of the casting. Also good for many other light manufacturing jobs that can be milled on two sides at a time.

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**W. B. Knight Machinery Co.**  
St. Louis, Mo.



## NICHOLSON Expanding Mandrel

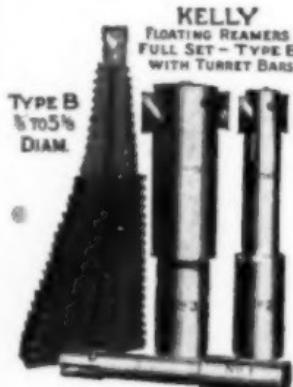
Making *every minute count* for as much as it *can* count is the key to present-day high-output manufacturing.

These NICHOLSON EXPANDING MANDRELS because they are instantly available for *any* sized square or round hole between  $\frac{1}{2}$ " and 7", are enormous time savers in set-ups for lathe, miller and grinder work.

By writing you can obtain, free of obligation, an interesting booklet showing the practical application of these time-saving mandrels.

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The outfit shown in cut, with three turret bars and 36 type B reamers, gives any diameter in ten thousandths from 15-16ths to 5/8 inches. Each reamer has an adjustment of  $\frac{1}{4}$ -inch.

Kelly Boring and Reaming Tools are made for any diameter from 9-16ths to 12 inches and larger.

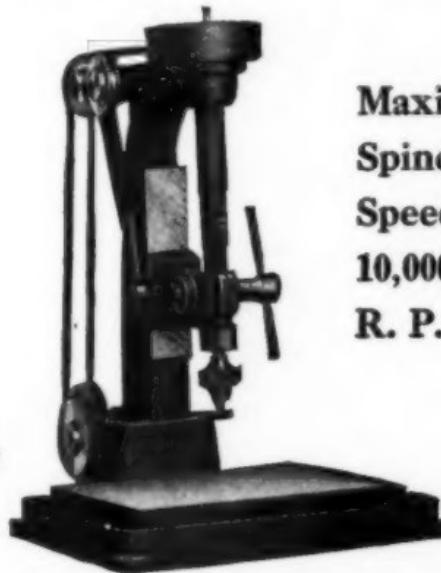
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**THE KELLY REAMER CO.**  
CLEVELAND, OHIO, U. S. A.

C. W. Burton, Griffiths & Co., London, English Agents.  
Burton Fils, Paris, French Agents. 40 Domestic Agencies.

# Save Money with this High Speed Drill

Patents  
Pending



Maximum  
Spindle  
Speed  
10,000  
R. P. M.

Double Your Production on Holes  
up to  $\frac{3}{8}$ " in diameter

This machine is carefully and accurately built  
to give the greatest service. Equipped with  
Hess Bright Ball Bearings throughout.

*Ask for Bulletin No. 502*

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## If You Had Only Owned A Walton Tap Extractor

the last time you had a broken tap, what a satisfaction it would have been. You wouldn't have thrown it away for twice its cost.



But there will be a next time, and probably several! next times, when a tap will break at or below the surface of the work. If you believe in preparedness you will order your Walton Tap Extractor now.

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**THE WALTON CO., Hartford, Conn.**

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### It Will

- Mill key seats uniformly spaced for dbl. and multiple keys.
- Mill key seats where key seating machine can't reach.
- Mill key seats that require no filing to fit the key.
- Mill key seats in holes that are closed at one end.
- Mill key seats of standard width and depth.
- Mill key seats without clamping the work.
- Mill key seats for interchangeable parts.
- Mill key seats partly through holes.
- Mill key seats with parallel sides.
- Mill key seats that are straight.
- Mill key seats on the drill press.
- Mill key seats that are central.
- Mill key seats for taper keys.
- Mill key seats in offset holes.
- Mill key seats in one cut.

*Write for Catalog O explaining in full detail*

**National Machine Tool Company**

2268 Spring Grove Ave., - Cincinnati, Ohio



Representative manufacturers throughout the world are installing  
**Sipp Quick Change Speed  
Sensitive Drill Presses**

and concede that they are in every sense the last word in drill presses, high grade, high speed, all ball bearing. Made in various combinations, one to eight spindles. Get in line if you are not already a user and save 95% of all the time lost on machines of inferior design. Order one now and get acquainted. Belt, horizontal and vertical motor driven. Net weight single spindle machine 925 pounds. A trial run of 30 days will convince you, or shall we tell you more about them? **A GOOD TOOL IS THE TIE THAT BINDS INTELLIGENT EFFORT TO GOOD PRODUCTION.**



Vertical  
Motor  
Driven

No. 70

*Bulletins on request*

**THE SIPP MACHINE CO., PATERSON, N. J.**

DISTRIBUTORS, Domestic: J. L. Osgood, Buffalo; Simmons Machinery Co., Albany; H. A. Smith Machinery Co., Syracuse; Niles-Bement-Pond Co. of Mass., Boston; Brownell Machinery Co., Providence; Purinton & Smith, Hartford; Monarch Machinery Co., Phila.; Kemp Machinery Co., Baltimore; Motch & Merryweather Machinery Co., Pittsburgh; Peninsular Machinery Co., Detroit; Marshall & Huschart Machinery Co., Chicago and St. Louis; Marshall-Huschart Machinery Co. of Indiana, Indianapolis; Patterson Tool & Supply Co., Dayton; National Supply Co., Toledo; Eccles & Smith, San Francisco.

FOREIGN: H. W. Ward & Co. Ltd., Birmingham and Milan; Glaenzer & Perread, Paris; Sociedad General De Representaciones, Madrid; Landre & Glinderman, Amsterdam; Braun & Company, Stockholm; Foss & Hill Machinery Co., Montreal, Canada.



## Increasing Production

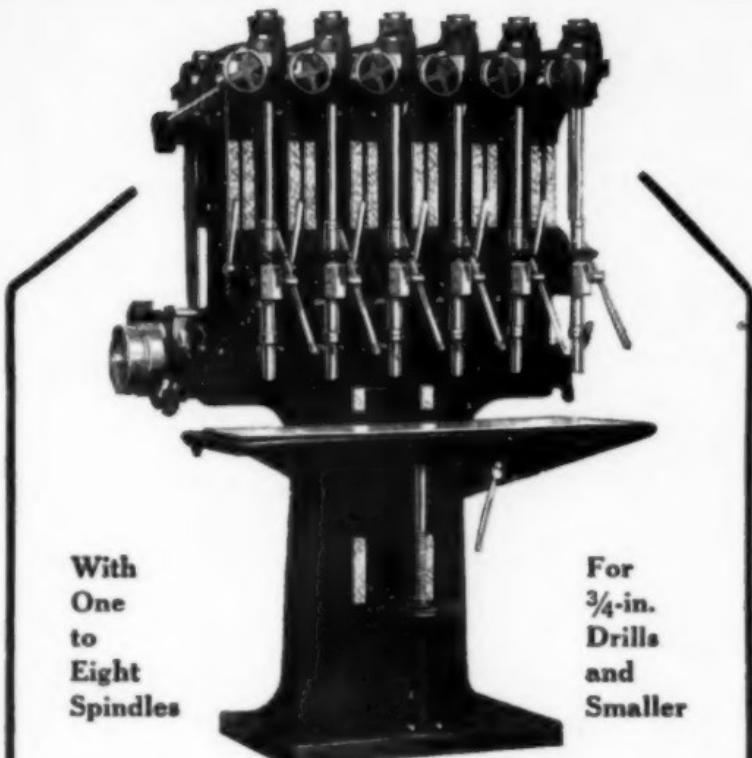
With T. & F. "Sensitive Radials"

THAT'S WHAT many manufacturers are doing today—those who have drilling to do up to  $\frac{3}{4}$  in.—in big, hard-to-handle pieces. Some of our customers have increased production two and three-fold without adding to the labor cost. While thoroly rigid in construction, it is the lightest machine of its kind—easiest to handle, quickest to adjust.

It has all the desirable features of our standard line, and by using drilling heads of different types it can be made to cover practically all drilling requirements within its range.

*Drilling and cost records are yours for the writing*

**The Taylor & Fenn Company**  
Hartford, Conn.



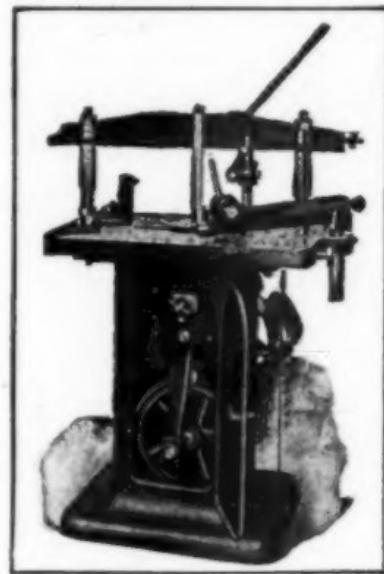
## Henry & Wright Drilling Machines

When you buy drilling machines, buy output. Results count. The Henry & Wrights, with their gearless power transmission, frictionless bearings and other improvements, give that increased daily output per spindle which means a reduction in shop costs during its life of more than its original price. Practical tests have satisfied many of the largest users, one plant alone having over 2300 Henry & Wright drilling spindles in operation. Among the 252 varieties you will find one or more precisely adapted to your work.

*Full details and our Speed and Feed Chart free*

**The Henry & Wright Mfg. Co.**  
760 Windsor St., Hartford, Conn.

# DAVIS KEYSEATERS



#### No. 1 Keyseater

No. 1      Keyseater will cut  
keyways from  $\frac{1}{8}$   
to 1 inch—

No. 2      Cuts  $\frac{1}{8}$  to  $\frac{5}{16}$  inch—

Their work is  
Rapid, Accurate  
and Economical.

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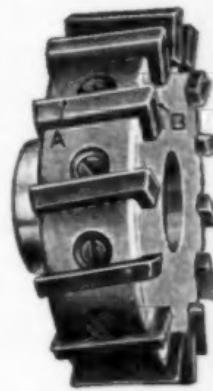
**DAVIS MACHINE TOOL CO., Inc.**  
ROCHESTER, N. Y., U. S. A.

# On Jobs Like This Brown & Sharpe Milling Cutters Make Production Records Climb

A somewhat unusual method of roughing out such castings, but a profitable one for quantity production. Put a B. & S. Inserted Tooth Milling Cutter on the machine and there will be no need to worry over cutter problems.

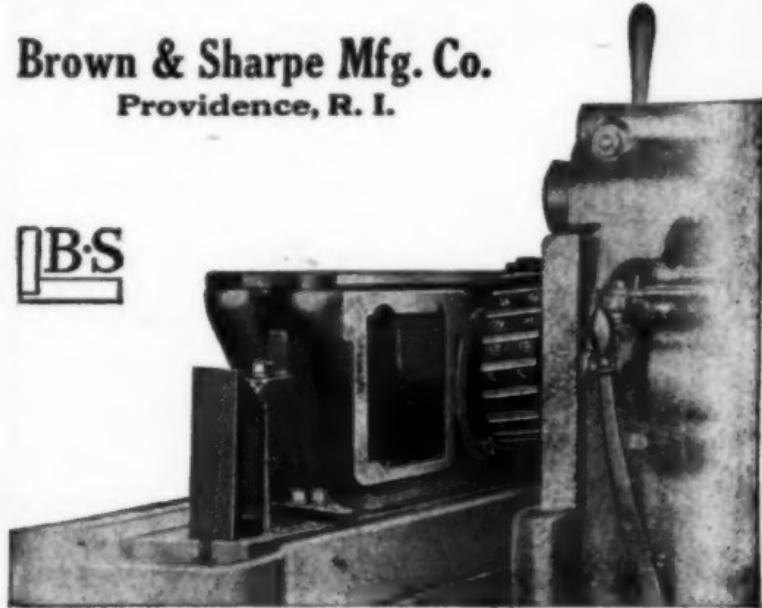
Individual blades can be quickly removed from the steel body or adjusted. In addition the B. & S. style of Inserted Tooth Face Milling Cutters are so held as to quickly release from the spindle; you do not have to *drive* them off.

Our General Catalog illustrates these, also about 45 other styles of high grade Cutters.



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Providence, R. I.**

**IBS**





This is our  
**No. 1 Bench Miller**

Our complete line of  
Millers range from the  
smallest machine built  
to our No. 5 (a floor  
type) weighing 1200 lbs.

We solve Miller problems

Your Troubles  
Our Pleasure

*Ask for Catalogue*

**The Burke Machine Tool Company**  
Conneaut, Ohio

**In A Class By Itself**



Is our New Model  
Bench Miller; be-  
cause, we furnish with  
the machine our  
Quick operating Le-  
ver Vise, also Index  
Centers and two speed  
friction countershaft.

*Send for circular*

**The Carter & Hakes Co.**  
West Winsted, Conn., U. S. A.

AGENTS—for New England and New York, Hill, Clarke & Co.  
WESTERN AGENTS—Marshall & Huschart Machinery Co.,  
Chicago, St. Louis, Indianapolis.



## The "Whitney" Hand Miller

is an all around machine. It will handle thousands of milling jobs that are now being done on larger twice-the-price machines.

The Jones & Lamson Machine Co., of Springfield, Vt., say:

"Your Milling Machine is one of the most indispensable tools in our milling department on account of its adaptability to many special uses."

You, too, will find this machine a profitable investment.

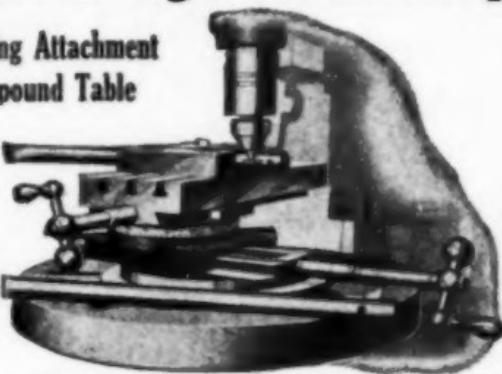
*Simply send a postal for Catalog No. 8.*

**The Whitney Mfg. Co., - Hartford, Conn.**  
Chains—Keys—Hand Milling Machines

## Valuable in Big or Small Shop

### Davis Milling Attachment and Compound Table

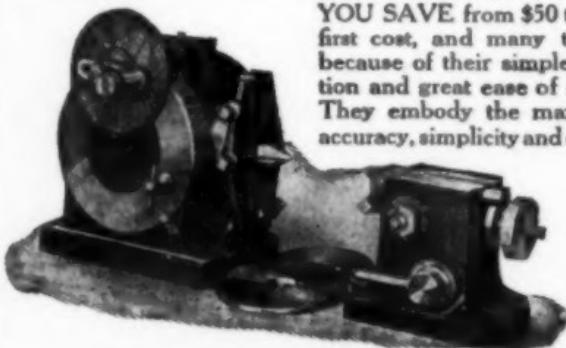
Converts  
any Drill  
Press from  
**14 to 42-in.**  
Swing in  
**2 Minutes**



When your large millers are tied up with work, a Davis comes in handy spotting castings, milling ends of bosses, and many other odd jobs. Does 90% of the lighter jobs as well as a \$1,000 machine. The attractive prices on our air compressor, and our cylinder reamers for reborning the Ford car, will also surprise you. Circulars and prices?

**Hinckley Machine Works, HINCKLEY,  
ILL.**

## Quality Is Highest—Not The Price Dickow's Guaranteed **10-In. Universal Index Centers**

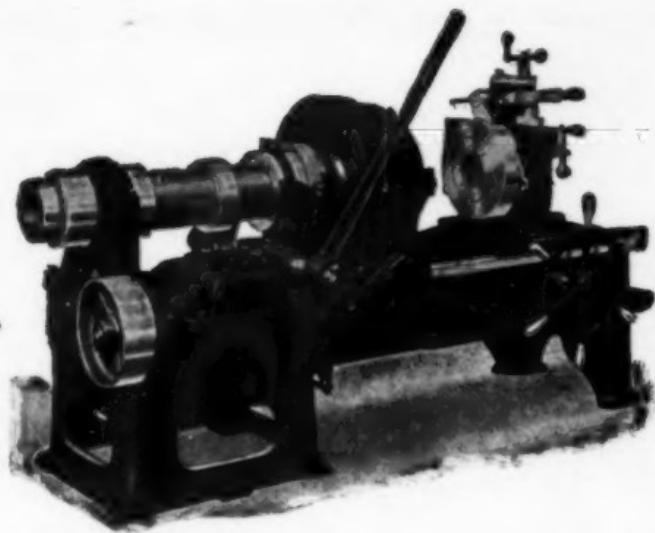


YOU SAVE from \$50 to \$125 on first cost, and many times that because of their simple construction and great ease of operation. They embody the maximum of accuracy, simplicity and durability.

**Get the Original—Beware of Imitators**

*Sold by all dealers. Write today for particulars.*

**Fred. C. Dickow, 35 So. Desplaines St., Chicago, Ill.**



## *Mature Machines*

Bignall & Keeler Pipe Threading Machines have been in use for nearly a third of a century. They are used today on all kinds of pipe, in all kinds of shops, giving the kind of service that brings us repeat orders.

We make them now in 17 styles and sizes, to thread and cut pipe from  $\frac{1}{4}$  to 18-in. Some are designed for handling many sizes with provision for quick adjustment, and others for especially rapid work on one size of pipe for manufacturing in quantities. No matter what your needs may be, we can furnish you with an improved machine that will do your work most economically.

*Our experience is at your service. Write us.*

**Bignall & Keeler Machine Works**  
**Edwardsville, Ill.**



Inaccuracies of less than a thousandth of an inch in tapers detected instantly

For measuring the various tapers on end mills, profile cutters, twist drills, reamers, milling machine arbors, lathe centers, etc., etc., the—

## Hartford Taper Gage

—is invaluable. It saves time and insures accuracy to such an extent, and is so inexpensive, that one manufacturer alone now has 32 in use throughout his plant.

The testing is done before a window. The gages are easily adjusted to a man's height, or may be taken off and used on a bench. The plates are adjustable to No. 14 B. & S. taper.

*Full details will interest you. Write to—*

**Hartford Special Machinery Co.**

285 Homestead Ave.,

Hartford, Conn.

**YOU Want Tool Holders that have MADE GOOD**

**Armstrong Tool Holders**

Were Awarded The

**Grand Prize**

The Highest Possible Award at the Panama-Pacific International Exposition—1915

*They Always Make Good*



They Are Used in Most of the Big Machine Shops of the World

*Send for Catalog*

**Armstrong Bros. Tool Co.**

"The Tool Holder People"

308 N. Francisco Ave., Chicago, U. S. A.





Continental Motor Mfg. Co.—Portion of Stockroom

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- ¶ Steel outwears wood.
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- ¶ Steel economizes space.
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- ¶ Steel reduces cost of handling stock and supplies.
- ¶ Steel admits of easy and low cost readjustment of bins and shelves.

While the first cost of wood may be somewhat lower, the many permanent advantages of steel makes the latter by far the most economical material to use.

*Send for Information on Steel Equipment so you can begin to put your plant on a more economical and efficient basis.*

**Terrell's Equipment Company**

Hall & Division Sts., Grand Rapids, Mich.



No. 24 Press

**Efficient  
Equipment  
Atlas Presses**

for building and repairing automobiles and general machine shop operations requiring pressure up to 25 tons and centering capacity up to 38 inches. For driving mandrels; bending and straightening, broaching, embossing with dies, setting bushings and many other every day manufacturing jobs, there is an Atlas Press. All sizes for all purposes. It will pay you to investigate.

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### Heavy and Medium Pressures

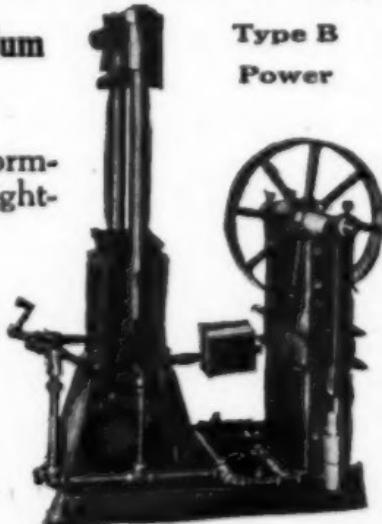
For Broaching, Forming, Bending, Straightening, etc.

### Presses for All Purposes

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Type B  
Power



# WEAVER

## Forcing Press

Capacity 20 Tons  
Strong—Roomy—Light



THE BALL BEARING HAND WHEEL enables the screw to be run its entire range of 12 inches in less than 10 seconds.

5-inch, 9-pound channel steel frame; 15-in. hand wheel, carried upon ball bearings. Bronze Thrust Bearings. Screw 2 in. in diameter with 3-pitch Acme thread. Range of movement, 12 in. The screw does not revolve.

Net Price (<sup>32-in.</sup><sub>Width</sub>) \$56.00

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Get Ready to Clean House Right



## Pipe, Shafting and Bars

are about the easiest things to get mixed up or scattered around, often in the way, and you simply can't clean house right unless you have the—

### "Handiest Racks"

They store your bar stock in a fourth the space, where you can see what you have, where you can keep them assorted, where you can get at them easily and quickly.

*Better get in touch with us NOW, and be prepared in ample time to change that mess into tidy stock at house-cleaning time.*

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Continuous Electric.  
Sells at half the  
price. Uses half  
the current  
of others.  
Perfect prints  
up to 48" in  
width and of  
unlimited  
length.

**Wickes Bros.,** Water St.,  
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This department is exclusively for those desiring machine, press or die work on contract. Advertisements must be set in uniform style, as shown, and without other display, or any variation in arrangement or in kind or size of type. The heading must express, as nearly as possible, the particular sort of work wanted, in order that any facilities offered may be easily found. Rates: one-eighth page, three months, \$12; one year, \$40.

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### **Stampings by Contract**

We have complete facilities for stamping, drawing and forming of sheet metal. Our presses are best suited for medium and large size stampings. We are equipped for baked enameling, spot and acetylene welding. Send us sample, sketch or blue-print for estimate. **The New Britain Machine Co., New Britain, Conn.**

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We are equipped to render satisfactory service on all kinds of general machine work. No job too big or too difficult. Established 1876. **Chicago Die & Machine Works, 415 N. Carpenter St., Chicago, Ill.**

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### **Brass Finishing—Metal Patterns—Screw Mach. Products**

Special brass work of every description, metal patterns and screw machine products. With a well-lighted shop, good tools and good mechanics, we believe we can satisfy you with our service. **B. W. Pokorney & Co., 132-134 S. Clinton St., Chicago, Ill.**

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**Gray Iron, Brass and Aluminum Castings. Skilled Pattern Work. Nickel Plating and Sheet Metal Work.**  
Let us estimate on your light and heavy gray iron, brass or aluminum castings, pattern work, nickel plating, sheet iron work and light sheet iron stamping. Reliable factory conditions, and best shipping facilities.  
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## CONTRACT WORK WANTED

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### High Grade Machine Manufacturing

We are equipped to manufacture high grade specialties and intricate machines, such as typewriters, adding machines, etc. Can improve a defective design, producing a machine that will work and sell. We especially desire problems of this kind. Large facilities for small stampings. **Grand Rapids Brass Co., 66-90 Scribner Av., Grand Rapids, Mich.**

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### Tool and Die Work

Every kind, for which we have the machinery and skilled labor to produce results. We are equipped also for special machine work. Our particular specialty is high grade service. Can you use that kind? **Manhattan Brass Works, Grand Rapids, Mich.**

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### Want Orders for Die Casting?

This is the place where you can offer your facilities to users of metal products everywhere in the United States. Many readers of the Tool List are in the market for die castings, and they would welcome information as to what you can do for them.

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### We'll Make It—Your Metal or Wood Specialty

We have unusual facilities for producing specialties in both metal and wood. Experimental and model work, pattern making. Jigs, dies, sheet metal work. Write for details. **Gas Engine & Power Co., and Charles L. Seabury & Co., Consolidated, Morris Heights, New York City.**

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### Sheet Metal Stamping and Manufacturing

We solicit your inquiries for light sheet metal stamping and manufacturing of specialties. **O. D. Johnson Stamping Works, Batavia, N. Y.**

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### Die Work

Exceptional facilities for making dies and tools and building machinery. **Titchener Iron Works, Binghamton, N. Y.**

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### Tools—Dies—Jigs—General Machine Work

Screw machine products. Efficient service and prompt deliveries. Send us your blueprints for quotations. **Commercial Motor Car Co., Inc., Owego, Tioga County, N. Y.**

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### General Machine Shop and Foundry Work

We are prepared to handle large and small work in our foundry and shops. Cheap freight rate via Clyde Line to New York. Prompt deliveries. Send us your drawings and inquiries and we shall give you our best prices. **Cape Fear Machine Works, Wilmington, N. C.**

## CONTRACT WORK WANTED

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### General Machine Work—Dies, Tools—Special Machinery

We are equipped to build machines of every description—sheet metal punches and dies-tools, models and jigs—long brake dies. Our object is high grade service. Send b. p. for estimate. **Canton Machine Shop, 320 Rex Ave., Canton, Ohio.**

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### Simplified Design

If your product is too complicated, you are paying a tax you can avoid. The very beginning of increased production is simple design. Let me comb over your designs. I can show results. **W. L. Schellenbach, Engineer, First National Bank Building, Cincinnati, Ohio.**

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### Work for Your Idle Equipment

You can get it, if you will let manufacturers know just what you can do. Tell them through this department. The cost is small; the distribution covers the metal manufacturing people everywhere in the United States.

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### General Machine Shop and Foundry Work

Fifty years' successful operation our record. We have a large and well equipped machine shop, also foundry. Plenty skilled labor. Can handle large and small work. Would like contract for a number of large machines, also for automobile parts and other machinery. **Southern Engine & Boiler Works, Jackson, Tenn.**

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### Lathe Work, Pipe Threading, Forge Work, Etc.

Machine work for lathes; cutting and threading pipe up to 18"; sheet iron and heavy plate work up to 1"; boilers, tanks, smoke stacks, etc.; also oxygen welding and cutting, and work for electric drill and hammer. Good facilities, low labor cost, prompt service. **F. O. Ambrose, 111-113 N. Main St., Janesville, Wis.**

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### Pressed and Stamped Steel Parts

It will pay you to let us figure on such pressed, stamped or drawn metal articles or parts as you may require, be they made of steel, aluminum, brass or copper. Our 15-acre plant at your disposal. Get the benefit of our "Knowing how since '81". Send samples or blue prints for estimate. **Geuder, Paeschke & Frey Co., Milwaukee, Wis., 1325-1700 St. Paul Av.**

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### Do You Want Contract Work?

If so, state in one of these spaces what you are prepared to do, and it will go into more manufacturing plants than if published in every mechanical journal in this country. The cost is low for a service covering metal-working plants of all kinds everywhere in the United States. **A. H. Hitchcock, Publisher, 1220-1235 Caxton Building, Chicago.**

## Want More Orders?

They are to be had for special contract work in machining, stamping, forging, casting, welding or any department of machine manufacturing. The problem is merely to bring the capacity and the demand for it together. If you have the idle capacity, and want work for it, the "Contract Work Wanted" department of the Tool List will help you to get in touch with machine-making plants everywhere in the United States. Its circulation among American metal working plants is country-wide. There is no other available means by which you can reach so many.

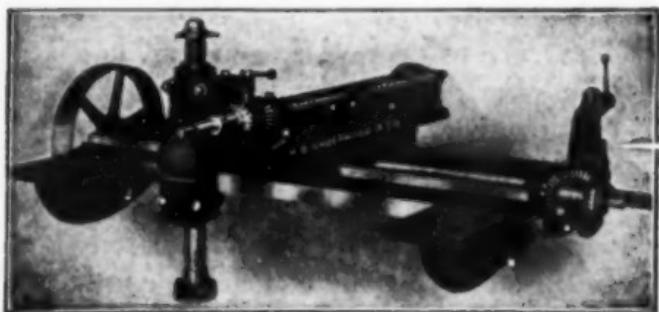
Don't let your equipment stand idle. That costs money—a lot more than it will cost you to find work for it. Write me for further information, and for a copy suggestion, which I shall be glad to make without cost or obligation.

A. H. Hitchcock, Publisher

**Hitchcock's Machine Tool List**  
1220-1235 Caxton Building, Chicago, Ill.

# Usable in Any Position

Underwood's Portable Milling Machine



THIS EXCEPTIONALLY HANDY and Efficient Tool is cutting time in two in railway and general repair shops. It has power feed in both directions, and is usable in any position—horizontal, vertical or inclined—making it easy to do a wide range of repairing *in place*.

It faces a valve seat 22 x 40 x 7 in., or does other milling of similar dimensions. Gives universal satisfaction because of its rapid and accurate work. We can build to suit special requirements. Operated by hand, small steam engine, air or electric motor.

We have been building Portable Tools and labor saving devices for over 45 years. Our line now includes:

Millers; circular planer tools; radius planers; rotary planers; machines for truing eccentrics, facing domes, arms for facing cylinder flanges; rotary flue cleaners; armature and axle bearing borers; pipe benders; locomotive cylinder borers; boring bar for lathe work; crank pin turners; reflex water glass grinders; rail saws; motors, etc.

*Since you want shop economy, send for our Catalog.*

**H. B. Underwood & Company**  
1016-32 Buttonwood St., Philadelphia, Pa.

## Second-Hand Machinery.

Lists of Second-Hand Machinery, either for sale or wanted, set in uniform style, will be published under this heading at the rate of **40 cents a line**, across the page, each issue. Minimum charge, **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. No display in this department.

Write directly to the parties offering the machines for sale for prices and full descriptions. If you do not find listed what you require, use the post card inclosed with each book to make known your wants to the publisher.

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### WANTED BY

**South Bend Machine Tool Co.,**

**South Bend, Ind.**

**SHAPER.**

A second-hand traveling head shaper, 16", 18" or 20" stroke. State condition and how long it has been used.

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### FOR SALE BY

**McMullen Machinery Co.,**

Automatics, 2" Cleveland, (2).  
Compressor, 8x8 Bury horiz.  
Drill, 3½" Blackford radial.  
Drill, 20" Bickford, w. f.  
Lathe, 13" x 1" C. & J., q. c. g.  
Lathe, 14x6 Shepard, semi-q. c. g.  
Lathe, No. 4 Cataract, bench.  
Lathe, 11x4 Pratt & W., speed.  
Lathe, 11x4 Wells, speed.

**Grand Rapids, Michigan**

Planer, 24x24x8 Whitcomb.  
Planer, 24x24x8 Lodge & Davis.  
Press, No. 3 Amer. Can Co., incl.  
Punch & sh., No. 3 L. & A. dbl., 6" th.  
Riveter, 4" Shuster, rotary.  
Riveter, No. 81-B Grant.  
Screw mach., 24" Oliver, p. f. to tur.  
Shaper, 14" Hendey, friction.  
Shaper, 16" Pratt & Whitney, b. g.

Ask for complete list.

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### FOR SALE BY

**The Bicknell Mfg. & Supply Co.,**

Centering machine, Whiton.  
Drill, Albany, friction.  
Drill, 10" Barnes.  
Drill, 24" light pattern.  
Drill, 24" Barnes, s. h. b. g.  
Lathe, 17" x 8" Greaves Klusman.  
Lathe, 14" x 6" Shepard, 2" h. s.  
Lathe, 18" x 6" comp. rest, h. s.  
Lathes, 18" x 8" comp. rest, h. s., (2).  
Lathe, 24" x 8" comp. rest, h. s.

**Janesville, Wis.**

Lathe, 24" x 16" comp. rest, h. s.  
Lathe, 18" stud lathe.  
Miller, Grant.  
Miller, Lincoln.  
Miller, Garvin Lincoln.  
Miller, slab.  
Punch and shear, cap. 4x1".  
Shaper, 16" Rockford, crank.  
Shaper, 22" geared.  
Tapping machine, horizontal.

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### FOR SALE BY

**The Machinery Warehouse, 3705 S. Ashland Ave., Chicago, Ill.**

The following pumps rebuilt and in guaranteed condition. These are in stock and ready for shipment.

**CENTRIFUGAL ENGINE DRIVEN PUMPS.**

2" Morris d. c. to a 3 h. p. gasoline engine.

No. 3 Lawrence d. c. to a 4 x 5 vertical engine.

No. 8 Wickes d. c. to a 8 x 8 vertical steam engine.

**CENTRIFUGAL BELT DRIVEN PUMPS.**

No. 3 Lawrence, 3" suction 3" disch.

No. 6 Morris, 8" suction, 6" dischar.

No. 10 Morris, 14" suction, 10" disch.

**TRIPLEX BELT DRIVEN PUMPS.**

1½x3 Gould, 1" suction, 1" dischar.

8x 8 Van Wei, 5" suction, 4" disch.

9x10 Rumsey, 7" suction, 6" dischar.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The H. A. Stocker Machinery Co., 566-72 W. Randolph St., Chicago**

#### BORING MILLS.

36" Niles, two swivel heads.  
40" Rogers & H., two swivel heads.  
52" Niles, car wheel boring mill.

51' Bullard, one swivel and one fixed head, arranged for motor drive and equipped with motor.

#### DRILLING MACHINES.

22" Aurora, s. h., b. g., p. f.  
24" Hamilton, b. g., p. f.  
26" W. F. & J. Barnes, s. h., b. g., p. f.  
32" Hamilton, s. h., b. g., p. f.  
32" Hoefer, s. h., b. g., p. f.  
34" Barnes, s. h., b. g., p. f.

34" Industrial radial.  
12 spindle multiple, P. & W.  
No. 38-C Baush, 12-spindle.  
Allan, 2-spindle (new).  
Allan, 4-spindle (new).

#### GEAR CUTTERS.

30"x9" Gould & Eberhardt automatic for spur and bevel.

24"x7" Gould & Eberhardt for spur.  
36" Walcott, for spur.

#### GRINDERS.

14"x30" B. & S., universal.  
Gisholt tool grinder.

No. 5 Diamond, water tool.

#### LATHES.

12"x 5' Davis, c. r.  
14"x 6' LeBlond, c. r., taper.  
14"x 6' Rockford, c. r., d. b. g.  
14"x 6' Fairbanks, c. r., taper.  
15"x 6' Goddard, c. r., taper.  
16"x 6' Prentice, c. r.  
16"x 6' Sebastian, p. r.  
16"x 6' Walcott, c. r.  
16"x 8' L. & S., pat. head, c.r., q.c.g.  
16"x10' Greaves & Klusman, c. r.  
17"x10' Blaisdell, c. r.

18"x 6' Bradford, c. r., taper.  
18"x 8' L. & S., pat. head, c.r., taper.  
18"x 8' Bradford, c. r. with turret.  
20"x10' Flather, c. r.  
21"x12' New Haven, c. r.  
21"x12' Bradford, c. r., taper.  
24"x16' Schumacher & Boye, c. r.  
30"x14' Reed, c. r.  
32"x16' Blaisdell, c. r.  
36"x12' American, c. r.  
36"x28' American, c. r.

#### MILLING MACHINES.

No. 12 B. & S. plain.  
No. 3 B. & S. plain, with vert. att.  
No. 2 Cincinnati plain.

No. 4 LeBlond plain.  
No. 13 P. & W., Lincoln.  
No. 14 Becker vertical.

#### PLANERS.

Morton portable.  
22"x22"x 6' Gray, one head.  
24"x24"x 6' Cincinnati, one head.  
30"x30"x12' Cincinnati, two heads.  
36"x36"x12' Cincinnati, two heads.  
36"x36"x16' Sellers, one head.

36"x36"x12' Powell, single head, arranged for two.  
39"x39"x12' New Haven, one head.  
40"x38"x14' Putnam, one head.  
40"x40"x12' New Haven, one head, one side head.

#### PRESSES.

No. 6-N American Can, s.s., geared.  
No. 174 Consolidated, double crank.

No. 25 Toledo, o.b. inc., cam drawing.  
No. 95 Bliss, double crank.

#### SCREW MACHINES.

No. 1 Chicago automatic.  
13-16" Hartford automatic.  
2" Cleveland automatic.  
24" Cleveland automatic.

1" B. & S., plain.  
16" P. & W. plain.  
No. 2 P. & W., geared.

#### TURRET LATHES.

16" Lodge & Shipley.  
25" Niles.  
22"x24" Jones & Lamson.

No. 2 Warner & Swasey, hollow hexagon.  
24" Gisholt, spindle capacity 6 $\frac{1}{2}$ ".

#### MISCELLANEOUS.

Bolt cutter, 1 $\frac{1}{2}$ " Acme.  
Centering machine, No. 1 Whiton.  
Cold saw, No. 1 Burr.  
Cold saw, No. 3 Burr.

Dividing heads, 10" B. & S.  
Keyseater, No. 2 Baker.  
Keyseater, No. 00 Baker.  
Oil separator, No. 2 National.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Henry Prentiss & Company, Inc.,** - Singer Bldg., New York  
Formerly

**Prentiss Tool & Supply Company,**

### BORING MILLS.

No. 1 Beaman & Smith, double hd.  
60" Bullard vertical.

5" bar Beaman & Smith horizontal.  
No. 1 Springfield spindle borer.

### DRILLING MACHINES.

2 sp. Henry & Wright.  
4-spindle Woodward & Rogers.  
4-spindle Barr.  
5-spindle Reed.  
20" Barnes all geared.  
24" Foote-Burt, cone drive.

3' Bickford radial, motor drive.  
3' Gang plain radial.  
4' Bickford plain radial.  
5' American radial.  
6-spindle Gardam adjustable.  
12-spindle Gardam, adjustable.

### GRINDERS.

No. 1 Brown & Sharpe, internal.  
Espen-Lucas saw grinder.  
Walker, single stroke, surface.

Misch valve grinder.  
3" Yankee, twist drill.  
12" Bristol rotary surface.

### LATHES.

12"x5' Davis, turret and chuck.  
13"x 6' Young, c. r., p. c. f., chuck.  
16"x 6' Automatic threading.  
18"x 6' Reed, c. r., p. c. f.  
18"x 8' Rahn-Carpenter, c. r., c.p. f.

20"x10' Le Blond, c. r., p. c. f.  
20"x 8' Lodge & Davis, c. r., p. c. f.  
21"x10' Bogart, c. r., p. c. f.  
42"x16' Niles, c. r., p. c. f.  
38"x10' Harrington, c. r., p.c. f., ck.

### MILLING MACHINES.

No. 3 Brainerd plain, vert. att.  
Lincoln type millers, (25).  
No. 2 Garvin universal.

Garvin duplex.  
Nos. 1 & 2 P. & W. hand.  
No. 5 Becker, vertical.

### PLANERS.

15"x15"x 3' New Haven.  
24"x24"x6' Gray.  
24"x24"x5' Whitcomb.

26"x26"x5' New Haven.  
32"x32"x8' Pond.  
36"x36"x15' Gleason.

### PUNCHES AND SHEARS.

25" Waiss & Roos.

| No. 5 New Doty, hand.

### SAWS.

4" Espen-Lucas.  
No. 1 Burr cold.

| 20" Burke, cold.  
| No. 1M Q. & C. power.

### SHAPERS.

20" Walcott.  
15" Juengst, friction.

| 20" Juengst, friction.  
| 24" Gould & Eberhardt.

### SCREW MACHINES.

1" Smurr & Kamen.  
3-A Warner & Swasey.  
13" Gisholt.  
18"x 7" Fay & Scott.

| 11" Rivett.  
| 24" Cleveland auto.  
| National-Acme, automatic.  
| 1" Hartford, automatic.

### MISCELLANEOUS.

Air compressor, 8"x8" American.  
Bending machine, 30 ton Watson  
Stillman.  
Blower, pressure, No. 4 American.  
Broaching machines, Nos. 2, 3 and 4  
LaPointe.

Cutting-off machine, 3" Davis.  
Gear cutter, 64x16 G. & E.  
Gear cutter, 22" G. & E.  
Keyseater, No. J Davis.  
Pipe machine, 6" Armstrong.  
Tapper, 4" Baker Bros.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Simmons Machine Co., Inc.** 981-985 Broadway, Albany, N. Y.  
**New York Office, 902 Singer Building**

#### NEW MACHINERY

##### LATHES.

13x6 So. Bend, h.s., c.r., p.c.f., (2)	\$ 285.
14x6 Monarch, q.c.g., d.b.g., (5)	600.
16x6 Canedy-Otto, c.r., p.c.f., (9)	450.

##### GRINDERS.

16x8 So. Bend, h.s., c.r., p.c.f., (2)	\$ 300.
18x8 Cisco, c. r., p. c. f., (2)	825.

Drill, W. & M., style W. P. T., (2)	\$ 160.
Surface, No. 1 W. & M., (3)	225.
Universal tool & cutter, No. 6	
Standard, with vise, int.arm,	
chuck, 2 sets jaws.....	485.

Double disc, 18", 2 extra discs, (2)	\$ 300.
Univ. tool & cutter, No. 6 Stand,	400.

External and internal portable,	
Dumore, (6)	75.
13x40 Full univ., No. 3 Modern	1800.
MILLERS.	
Plain, No. 1½ Valley City, .....	\$ 850.

Plain, No. 3 Kempsmith .....	1450.
Plain, No. 24 Oesterlein, heavy	1970.

Plain, No. 34 Oesterlein, heavy	1500.
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##### MISCELLANEOUS.

Drills, No. 28 C.-O. sens. (2)	\$ 25.
Drills, 20" Canedy-O., p. f. (2)	105.
Drill, 20" C.-O., p. f., tap. att.	125.
Drills, type B, Sipp No. 1, (2)	179.

Shaper, 20" Ohio, crank.....	\$ 725.
Screw mchs., hand, No. 3 Fos-	

ter pl., long fd. to cut-off slide	575.
Screw mch., No. 2 Hercules, .....	500.

##### USED MACHINERY

##### LATHES.

10x4 Seneca Falls, 4-sp., screw	
cutting, chuck .....	\$ 140.
12x5½ Barnes, h. s., s. r., s. c.,	100.
12x5½ Barnes, swiv.r., screw ctg.,	
turret on shears, steady rest.	190.
13x6 Seneca Falls, c. r., h. s.,	425.
18x8 American, q.c.g., c.r., p.c.f.,	
complete with chuck, (2).....	850.
18x8 Porter, c. r., p. c. f., chk.	375.
20x8 LeBlond c. r., p. c. f., h. s.,	875.
20x8 Pond, c. r., p. c. f., h. s., chk.	550.
22x8 Connell-G., s. s., p. c. f., pr.	165.
22x10 Niles, c. r., p. c. f., h. s.,	775.

22x12 Field, c. r., p. c. f., s. s.,	
grinding attachment.....	\$ 650.

2½" Bardons & O., used 3 mos., (2)	\$ 1050.
2½" B. & O., used 3 mos., (20)	1200.
No. 2 W. & S. used 3 mos (20)	550.
Wood 1" tilted turret, pan bed,	
auto. chuck, collets, etc.....	450.

26x10 Pond, c. r., p. c. f., ex. hyv.	850.
28x10 Ames, p. c. f.,	290.

28x10 Ames, p. c. f., chuck.....	300.
30x9 New Haven, turret tool	
post, chuck, taper attach.....	460.
30x16 New H. p. r., p. c. f., chk.	450.
32x16 F. & S., q. c. g., h. s., c.r.	1650.
40x14 Harris, c.r., p.c.f., s.s., chk.	800.
68x16 Pond, c. r., p. c. f., 4½" h. s.,	2000.
19x38x8 Fay & S. extension, c.	
r. p. c. f., h. s.....	1150.

##### SCREW MACHINES.

24" Davis boring & chucking	\$ 775.
Pratt & W., 1 7-32" hole, dbl.	
cutting-off slide.....	275.
Potter & J. semi-auto. tur. 3" h. s.	650.
P. & J. semi-auto., 4½" h. s.....	750.

##### PLANERS.

30x30x7 Flather hi-duty, perfect	\$ 850.
30x30x8 Pond ex. hyv., excellent	1200.
54x54x16 Sellers, solid bed, 3	
heads, excellent condition .....	2000.
60x60x12 Betts, solid bed, 3	
heads, perfect condition.....	1800.

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heads, excellent condition .....	2000.

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heads, perfect condition.....	1800.

60x60x12 Betts, solid bed, 3	
heads, perfect condition.....	1800.

54x54x16 Sellers, solid bed, 3	


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## SECOND-HAND MACHINERY

**Simmons Machine Co., Inc.,—Continued**

### MISCELLANEOUS.

Automatic, 4" 4-sp. Gridley, q. c. g., single pulley drive.	\$ 1200.	Miller, Newton vertical, circular table 36" diam.....	\$ 700.
Borer, wheel, Putnam, fine cond.	300.	Miller, No. 15 Garvin plain, index head.....	750.
Boring mill, 36" Bickford.....	2000.	Miller, No. 2 Cincinnati uni- versal complete.....	1150.
Boring mill, 60" Niles, vert. ....	2650.	Miller, Garvin duplex, table 40x10, three T slots, (2).....	700.
Boring mill, 60" Sellers, ex. cond.	2650.	Press, Bliss No. 68-N, dbl. actg.,	550.
Cutting-off mch., 3" H. & R. ....	275.	Punch press, No. 55 Bliss .....	250.
Gear cutter, 48x12 Gould & Eberhardt, all attachments.....	700.	Shaper, 12" Juengst crank.....	275.
Keyseater, No. 2 Davis, per. com.	150.	Shaper, 16" Smith & M., crank	450.
Miller, No. 7 B.-B., Lincoln, (2)....	475.	Shaper, 24" G. & E., perf. cond.	650.
Miller, No. 284 Bement, Lincoln .....	250.	Shaper, 24" Cinti., perf. cond..	750.
Millers, P. & W. Lincoln, (12)....	150.	Shaper, 28" Ohio, like new.....	700.
Miller, No. 32 Kempsmuth Lincoln, excellent condition .....	600.	Thread miller, Holden Morgan	400.
Miller, No. 3 Cincinnati, plain .....	1200.		

### FOR SALE BY

**Badger-Packard Mch. Co., 72-74-76 W. Water St., Milwaukee, Wis.**

### DRILLING MACHINES.

14" Mechanics, lever feed, round base, (2).	31" Rockford, sliding head, back geared, reversing attachment.
14" Milwaukee, lever fd., round base.	20" Barnes, geared.
14" Excelsior sensitive, lever feed, round base.	20" Champion, b. g., power feed. 3-sp. Henry & Wright, ball bearing.

### LATHES.

24"x12' Perkins, compound rest, solid spindle, countershaft.	18"x10' Blaisdell, compound rest.
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### MISCELLANEOUS.

Air compressor, 10x10 Franklin, com- plete with tanks and fittings.	Hack saw, No. 2 Racine high speed practically new.
Buffing lathe, No. 10 Hanson-Van Winkle.	Miller, No. 2 Hissey, plain.
Grinder, disc, No. 3 Besly.	Punch, bench, No. 21 S. M. & W.
Grinder, drill, Yankee style B.	Punch press, No. 2-C Consolidated not inclinable.
Grinder, water, 20" Diamond No. 64.	Shaper, b. g. crank, 20" Smith & M

### FOR SALE BY

**Brown-McDonald Machinery Co.,**

**906-908-910 North Market Street, - - - - - St. Louis, Mo.**

### LATHES.

17"x8" Sidney, q. c. g.	15"x 8' South Bend, new.
13"x6" South Bend, (new).	16"x 8' South Bend, new.
14"x5" Putnam, s. s., p. r.	17"x8" Fifield, h. s., p. r.
14"x8" Fitchburg, s. s., p. r.	Fox brass lathes, (4).

### DRILLING MACHINES.

Barnes, 4" capacity, single spindle.	New 20" Champion, w. & l., back geared and power feed.
Reed 4-spindle No. 33, 4" capacity.	36" s. h., back geared, p. f.
New 20" Champion, w. & l., (3).	

### PLANERS.

26"x26"x7' Whitcomb.	30"x30"x9' New Haven.
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### COMPRESSORS.

8x8 Star, a. g., cyl., dbl. a., belted.	1160 cu. ft. Ingersol, steam, cpd. air.
10x10 Star, with 10x10 vert. engine.	20x20x13 $\frac{1}{2}$ " Norwalk, straight line.

### MISCELLANEOUS.

Cold saw, Q. & C.	Rolls, 8" Hilles & Jones, cap. 3".
Friction saw, Ryerson, motor driven.	Shaper, 14" Steptoe, crank.
Hack saw, Atkins Kwik Kut.	Shears, square, 37" Bertsch, 15" gap.
Hammer, helve, 60 lb. Knowlton.	Slab miller, 48" Cincinnati.
Hammer, helve, Rochester, size B.	Steel brakes, 4' and 8'.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Shepard Lathe Company.**

**Cincinnati, Ohio**

#### LATHES.

Four 12"x24" centers, quick change gear, for immediate shipment.  
Two 12"x18" centers, quick change gear, for immediate shipment.  
Three 10"x25" centers, quick change gear, two weeks' delivery.  
One 10"x16" centers, quick change gear, two weeks' delivery.  
Reasonable prices.

### FOR SALE BY

**Girard Machine & Tool Co., 491-493 N. Third St., Philadelphia, Pa.**

#### LATHES.

48"x21' Pond, c. r.	21"x8' LeBlond, hollow spindle.
24"x10' New Haven, c. r.	17"x8' Johnson, c. r.
22"x 9' 6" Warsaw.	14"x 6' Lodge & Shipley, hol. spdl.
21"x16' Fisfield, c. r.	11"x 5' Reed, r. f. r.

#### MISCELLANEOUS.

Boring mills, turret head vertical, 36" Brown & Sharpe, (2).  
Boring mill, 36" Bridgeport.  
Broaching machine, No. 2 Lapointe.  
Cold cutting-off saws, capacities 4", 5" and 6" round.  
Gear cutter, 36" Whiton.  
Milling machines, No. 2 Pratt & Whitney, plain table 20"x7"; No. 0 Pratt & Whitney, plain, table 5"x24".  
Pipe cutting and threading machines, 4" and 6".  
Planer, 24"x24"x5' Betts, with one head.  
Shapers, 24" Hendey heavy duty.  
Slab miller, 17"x8" Beaman & Smith, with two horizontal spindles.  
Stamping and punching presses, a large number of the open back inclinable, straight side and arch types.  
Turret lathes, large stock of various sizes and makes.

### FOR SALE BY

**Frank Toomey, Inc.,**

**127-131 N. Third St., Philadelphia, Pa.**

#### LATHES AND TURRETS.

26"-48"x14' new dbl. spdl. McCabe  
lathes, heavy pattern, (11).  
28"x15' Harrington.  
26"x14' Star.  
24"x12' new Carroll Jamieson.  
20"x10' Blaisdell.  
19"x 8' Rahn Mayer.  
19"x 8' new Sidney, d. b. g., q. c. g.,  
swing 21", (3).  
17"x 8' new Sidney, d. b. g., q. c. g.,  
swing 19", (3).  
18"x10' Cincinnati.  
17"x 8' new National, q. c. g., (9).  
15"x10' Sebastian.

#### MISCELLANEOUS.

Boring mill, vertical, 36" Baush, one  
turret head.  
Drill, 23" Superior, new.  
Drill, 24" Bement.  
Drill, 25" Superior, new.  
Drill, 36" Currie & Snyder.  
Grinder, universal, 12"x36" Bath.  
Grinder, universal, 12"x66" Landis.  
Grinder, ring, No. 210 Heald, wet.  
Hammer, steam, 350 lb. Sellers.

14"x10' Prentice, t. a.  
13"x7" new Carroll-Jamieson, (12).  
12"x25" bet. center, new Shepard (4).  
24" Gisholt.  
2"x24" Jones & Lamson, (2).  
2" Cleveland automatic screw mchne.  
2½ wire feed Foster, ring.  
16"x6' Windsor, b. g., f. h.  
14"x5' Bridgeport.  
14"x5' Lodge & Shipley, wire feed.  
14"x5' Warner Swasey, Fox.  
1"x8" new Pierce screw machine.  
1" P. & W. hand screw machine.  
1" Hartford auto. screw machine.

Hammer, steam, 600 lb. Morgan.  
Miller, Steptoe, b. g., p. f.  
Miller, plain, No. 1½ American.  
Miller, No. 23 B. & S., pl.tbl. 50x10".  
Planer, 18"x18"x5' Pond.  
Planer, 25"x22"x6' Powell.  
Radial drill, 42" Betts.  
Shaper, 20" Cincinnati, b. g.  
Shaper, 24" Flather, b. g.  
Tapping & drilling mchne., 36" Baker.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Motch & Merryweather Machinery Company,**  
**707-715 Lakeside Av., N. W. - - - Cleveland, Ohio**  
**Branches: Detroit, Cincinnati, Pittsburgh.**

#### AUTOMATICS.

2" Cleveland, modern, (2).	14" Fay automatic lathe.
No. 56 National-Acme.	No. 2 Brown & Sharpe, (2).

#### BORING MILLS.

60" Niles vertical.	No. 2 Baker cylinder borers, (2).
24" bar 36" Niles horizontal.	

#### DRILL PRESSES.

4" Prentiss gear box radial.	24" Cincinnati, sliding head, upright.
4" Baush radial.	Quint, turret head, (2).
40" Aurora, sliding head upright.	8-spindle Fox, round head.

#### GEAR CUTTERS.

26"x8" No. 3 Brown & Sharpe, (2).	50" G. E. spur and bevel, old.
36" Flather.	5" Bilgrim, (2).

#### GRINDERS.

No. 1½ Bath universal.	No. 6A Bryant internal.
10x50 Norton.	Springfield Brandis, surf., motor dr.
14x50 Norton.	No. 12 Gardner, disc.
14x7½ Norton.	No. 2 Leland & Faulkner, wet tool.
No. 6 Modern, arranged internal.	Polishing and buffing stands.

#### HAMMERS.

2000 lb. Chambersburg, steam.	36" Williams-W., "Justice" tire welder
300 lb. Morgan & Williams.	500 lb. Chambersburgh.

#### KEYSEATERS.

No. 6 Baker.	No. 3 Mitts & Merrill, with equip.
No. 2 Baker, (2).	18"x14" Morton.

#### LATHES.

12"x5' American, turret on shear.	18"x10' Bradford.
14"x6" Fay & Scott, new, (6).	18"x12' Lodge & Shipley, patent hd.
16"x6" Blaisdell, r. f. rest.	22"x14' Davenport, new.
18"x8" Hamilton, (2).	26"x12', 3-step cone, d. b. g., q. c., Bridgeford standard engine, (7).
18"x8" Davis, 3-step cone, d. b. g., c. r., semi q. c., (11).	Tindale-Morris crankshaft lathe.

#### MILLING MACHINES.

No. 3 Brown & Sharpe plain.	Pratt & Whitney spline miller.
No. 4 Brown & Sharpe plain.	
No. 2A Becker, circular tables.	No. 6 Whitney hand miller.

#### PLANERS.

48"x48"x12' Hewes & Phillips, 2 hds.	24"x24"x6' Gray, 1 rail head.
24"x24"x6' Cincinnati, 1 rail head.	26"x28"x10' Gray, 1 rail head.

#### PRESSES.

Long & Allstatter dbl.end 1" punch.	No. 2½ V. & O., new.
6"x6"x1" angle shear.	No. 3 V. & O., new.
No. 5 Buffalo forge hand shear.	

#### SCREW MACHINES.

4½"x36" Bardons & Oliver, motor drive.	1" Foster-Kimball, no w. f.
1½" Bardons & Oliver, no w. f.	1" Garvin, no w. f.

#### TURRET LATHES.

24" Gisholt, 6½-hole, 1 year old, (7).	36" Pratt & Whitney flat, (3).
24" Gisholt, 5½-hole, 1 year old, (4).	36" J. & L., (3).
21" Gisholt, 2½-hole, 1 year old, (5).	No. 2 W. & S., hollow hex.
22" Libby.	2" x 24" J. & L., bar.

#### TAPPING MACHINES.

7" Baker.	No. 2 Garvin.
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#### MISCELLANEOUS.

Flywheel balancing mch., Rockford.	Folder, 72" Niagara.
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## SECOND-HAND MACHINERY

### FOR SALE BY

#### **Enterprise Machinery Co.,**

Grinder, cock, double end..... \$ 35.  
 Grinder, 12"x42" Landis..... 1100.  
 Lathe, gap, 15-22"x6" Sebastian, 290.  
 Lathe, 18"x12" Blaisdell, c. r.... 300.  
 Lathe head, 36" face pl. c. s.... 85.  
 Miller, hand, 9"x5"x3" Pond..... 90.  
 Miller, Lincoln type 27" table, 90.  
 Miller, Brainerd, p. f., 8"x30" - 375.  
 Planer, 42"x15", 2 hds., good .. 1200.  
 Profiler, good condition.

#### **32-34 S. Clinton St., Chicago, Ill.**

Punch press, arch, bed 28x30... \$ 190.  
 Punch pr., straight side, 6000 lb. 350.  
 Punch, shear and rod cutters,  
     new, power, 8" to 1", \$115 to.. 290.  
 Sc. mch., No. 2 B. & S. auto., (8) 150.  
 Screw mch., 1" Cleveland, (3) 150.  
 Screw mch., 2" P. & W., auto. fd. 150.  
 Screw mch., J. & L. (15) \$600 to 1200.  
 Sq. shear, 30" power, ..... 150.  
 Over 500 other tools; write us.

### FOR SALE BY

#### **Cyril J. Bath, Cleveland, Ohio**

##### **Offices: 428 Leader-News Bldg.**

Automatic, 7"x14" P. & J., very good.  
 Boring mill, 2-spdl. Beaman & S.  
 Boring machines, heavy vertical,  
     single bar, (2).  
 Centering mch., 4" Whiton, very g.d.  
 Forge slotter, 50" hyd. duty, good.  
 Hammer, power, 100 lb. Beaudry  
     "Champion", very good.  
 Hammer, stm., 800 lb. Sellers, sgl. fr.

##### **Warehouse: 1031 W. Front St.**

Hammer, steam drop, 1,000 lb. Lane,  
     fair.  
 Lathe, 12"x5' Young, c. rest, good.  
 Lathes, 16"x8" and 8' Davis, quick  
     change gear, new.  
 Planer, 72"x72"x30' Niles, 4 heads.  
 Riveter, rotary blow, 8" Shuster.  
 Threading mch., 8" to 1" Geometric,  
     and dies, almost new.

#### GENERATOR SET.

Large generator set, good as new, 400 k. w., 240 v., Crocker-Wheeler, direct  
 connected to Hamilton-Corliss non-condensing heavy duty cross compound  
 steam engine, 130 lbs.; complete with switchboards and all equipment;  
 may be seen in operation.

### FOR SALE BY

#### **Wm. C. Johnson & Sons Machinery Co.,**

##### **210-212 Washington Ave.,**

##### **St. Louis, Mo.**

#### LATHES.

11"x 5' Perkins.  
 14"x 8' Putnam.  
 15"x 8' Carroll-Jamieson.  
 17"x 8' Cincinnati.

18"x 8' Lodge & Davis.  
 18"x 8' Kahn & Larmon.  
 26"x12' Reed.

#### DRILLING MACHINES.

20" Barnes.  
 26" Barnes, sliding head.  
 22"x22"x 5' Powell.  
 32"x32"x14' Niles.

28" Hamilton.  
 42" Niles gooseneck, heavy.

#### PLANERS.

36"x36"x10' Powell.  
 36"x36"x 8' Powell.

#### AIR COMPRESSORS.

6"x6" belted.  
 8"x8" belted.  
 9"x8"x9" steam driven.  
 10"x10"x10" steam driven.

12"x12"x16" steam driven.  
 600 cu. ft., belted.  
 1600 cu. ft., steam driven.

#### MOTORS.

5 h. p. Wagner single phase.  
 35 h. p. G. E. 3 ph. 60 cy. 230 v.  
 55 h. p. 500 volt, d. c.

80 h. p. 500 volt, d. c.  
 50 h. p. 220 volt, d. c.  
 50 k. w. 220 volt, d. c. generator.

#### MISCELLANEOUS.

Bending rolls, 6' for 4" plate.  
 Boring machine, 2-spindle horizontal, Newton.  
 Hammer, 80 lb., Yeakley.  
 Pipe machine, 2 1/2" to 8" E. C. & B.  
 Pipe machine, 4" portable.

Pipe and nipple machine, 2".  
 Pipe machine, 4" to 12" Bignal & Keeler.  
 Punch and shear, double end.  
 Punch and shear, Bremmer comb.  
 Riveter, 10" cylinder compression.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Strong, Carlisle & Hammond Co., Cleveland, O., Detroit, Mich.**

#### ENGINE LATHES.

14"x6' Blaisdell, p. r.	16"x8' Lodge & Shipley patent head, q. c. g., pan bed.
14"x6' LeBlond, c. r.	18"x8' Bradford, c. r. & t. a.
16"x6' Lathe & Morse, r. & f.	20"x6' New Haven, c. r.
16"x8' Lodge & Shipley, c. r.	24"x8' Putnam, c. r.
16"x8' Bullard, p. r.	32"x18' Nixon, p. r.
16"x8' Davis c. r. & t. a., q. c. g.	48"x26' Fifield, c. r., triple geared.
18"x6' Fitchburg, c. r.	

#### FOX LATHES.

14"x6', square arbor, set-over tail-stock, (2).	20" American, universal turret.
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#### TURRET LATHES.

18" Lodge & Davis, gear feed head, automatic chuck.	No. 7 Bardons & Oliver, gear feed head, with vertical forming attachment.
14" W. & S. plain head.	14" Lodge & Davis, plain head.

28" Gisholt complete, motor driven, 110 or 220 d. c.

#### MILLING MACHINES.

No. 8 Brainard, Lincoln type.

#### UPRIGHT DRILLS.

20", w. & l. fd., s. b., (4).	20" b. g. & p. f., s. b., (4).
Sensitive drills, (2).	

#### MULTIPLE DRILLS.

Detroit 5-spindle horizontal semi-automatic.

#### PLANERS.

48"x48"x10' Pond, 2 heads.  
52"x52"x24' Betts, 2 heads.

3 and 6-spindle sensitive.

20"x20"x3', spur planer.

#### PUNCH PRESSES.

No. 18 Bliss plain inclinable, (2).

No. 018 Bliss, plain bench.

#### BORING MILLS.

36" Barrett horizontal cylinder boring, (2).

30" Colburn vertical boring and turning mill, 3-jaw combination chuck, table.

Head plate boring lathe.

#### GRINDERS.

Warner & Swasey cock grinders.

Roebottom, 16" discs.

No. 60 Heald, cylinder.

14" & 20" wet grinders, (5).

Size "D" Gorton, 18" discs.

No. 10 Brown & Sharpe, plain.

No. 10 Besly, 18" discs.

10"x24" Landis, plain wide wheel.

#### SHAPERS.

16" Fitchburg, traveling head.

15" Walcott, geared.

20" Walcott, friction.

18" Barker & Chard, plain crank.

#### SCREW MACHINES.

14" Cleveland automatic, 3-hole.

2" Hartford automatic, 5-hole.

2" Cleveland automatic, 5-hole.

No. 00 Brown & Sharpe automatic.

No. 0 Bardons & Oliver, p. h., a. c.,

w. f., power feed.

a. c., w. f.

#### MISCELLANEOUS.

Bolt cutter, 14" Stockwell, sgle. hd.

Oil separators, No. 150 Curtis, ball bearing, (2).

Bolt cutter, 14" Acme, single head.

Pipe machine, 2" Jarecki.

Bolt cutter, 14" Wells, single head.

Pipe machine, 4" Williams.

Cold saws, 12" Burke, (2).

Profiler, No. 2 Garvin, 2 spindle,

Cold saw, No. 11 Higley.

Wesson drive.

Grinder, planer type, 16x50" Springfield.

Pulley lathe, 36" Stevens, with boring attachment.

Grinder, tool post, Hisey type B,

Radial, 6' arm Cleveland P. & S.

110 d. c.

Works, wall type.

Grinder, extension, internal, 12"

Squaring shear, 12' Piqua Blower

Hisey type D. E., 110 d. c.

Co., No. 14 gauge cap., new.

Keyseater, Morton, draw stroke.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### **Neidow & Payson Co.,**

Automatics, 1" to 2".  
Boring and turning mills, 41" to 100".  
Borer, 2-spindle cylinder.  
Cold saw, 36" blade.  
Drills, multiple spdl. and sensitive.  
Gear hobber, 18" Grant-Lees.  
Gear cutters, G. & E. and B. & S.  
Grinder, 10"x36" Landis.  
Hammers, steam, 600 to 3000 lbs.  
We can ship heavy duty Lathes, 26" to 42" swing, any length, in 30 days.

#### **9 So. Clinton St., Chicago, Ill.**

Hammer, board, 1200 lb. B. & S.  
Lathes, 9" to 90" swing.  
Lathes, 2" and 3" J. & L.  
Miller, No. 3 Brainard plain.  
Miller, P. & W., spline.  
Miller, 72"x48"x10", slab.  
Planers, 26" to 72" wide.  
Press, screw, pwr., No. 2 Amer. Can.  
Press, 200 ton Niles car wheel.  
We can ship heavy duty Lathes, 26" to 42" swing, any length, in 30 days.

### FOR SALE BY

#### **J. L. Osgood,**

Cutting-off machine, 2" H. & R.  
Cylinder borer and grinder, 24"  
Davis, jigs and cutter bars.  
Disc grinder & press, No. 6 Gardner.  
Drill, 14" Reed, and chuck.  
Drill, 20" Snyder, p. f. and a. s.  
Drills, 20" Davis, b. g., a. f., (2).  
Gear generators, double tool, 18"  
Gleason, like new (2).  
Lathes, 12" speed lathes.  
Lathes, 11"x4" Reed, r. & f. rest,  
chuck fitted.  
Lathe, 12"x5' Robbins, r. & f. rest.  
Lathe, 14"x6' Reed, r. & f. rest.  
Lathe, 18"x6' Hamilton, c. r., chuck  
fitted.

#### **45 Pearl St., Buffalo, N. Y.**

Lathe, 18"x12' Greaves & K., c. r.,  
chuck fitted.  
Millers, hand, Whitney, new (2).  
Miller, Carter & Hakes, Lincoln.  
Miller, Lincoln, 12" Cincinnati.  
Piston & ring mch., Gridley, motor.  
Power press, Dodge, 12" throat, 24"  
fly wheel.  
Screw machines, hand, B. & S. No. 0,  
new, (2).  
Shaper, 15" Hendey.  
Stud mchs., No. 0 B. & S. auto., (2).  
Surfacing machine, emery belt, 14"  
Peerless.  
Turret lathe, 20"x8' Fay & Scott.

### FOR SALE BY

#### **Walter P. Dolle,**

#### **412 Traction Bldg., Cincinnati, Ohio**

Air compressor, Ingersoll-Rand N. F. 1; 310 cubic feet at 100 lb. pressure.  
Automatics, multiple spindle, size 33 New Britain, (10).  
Bevel gear planer, 15" Gleason, single tool.  
Bevel gear planer, 24" Gleason, single tool.  
Boring mill, vertical, 72" Pond, double swivel head.  
Broaching machine, double, No. 2 Lapointe, new.  
Car wheel borer, 42" Niles, cone drive.  
Drill, 25" Barnes.  
Flat turret lathes, 24x24 J. & L., sliding head, (6).  
Gear cutter, 48" Gould & Eberhardt.  
Grinder, Gardner, double disc.  
Grinder, Yankee twist drill, style W. P. L.  
Lathe, 16"x8" LeBlond.  
Lathe, standard engine, 32"x24" LeBlond, raising blocks to 52".  
Lathe, 42"x18" Bradford, triple geared, cone head.  
Lathe, 56"x12" New York steam engine, triple geared.  
Milling machine, plain, No. 3 Cincinnati.  
Milling machines, P. & W. double spline, (2).  
Planer, 22"x22"x5' American, single head.  
Planer, 70"x80"x16" Cincinnati, 4 heads.  
Planer, 76"x62"x32" Cincinnati.  
Punch and shears, multiple, Long & Alstatter style B, 8' between housings,  
10 $\frac{1}{2}$ " throat, motor driven.  
Radial drill, 6' Gang.  
Radial drill, 6' Dresses, full universal.  
Screw machines, No. 2, plain head, hand, 1 1-16" cap., new, (10).  
Slotters, 14" Sellers.  
Turret lathe, No. 2 Bardons & Oliver.

## SECOND-HAND MACHINERY

### FOR SALE BY

J. Sklar Manufacturing Co., 133-143 Floyd St., Brooklyn, N. Y.

#### AUTOMATIC SCREW MACHINE.

A second-hand  $\frac{1}{2}$ " Cleveland automatic screw machine complete with counter-shaft, in first-class condition, which we wish to dispose of as we have no further use for a machine of this size.

### FOR SALE BY

W. L. Perkins, Jr.,

30 Church St., New York

#### LATHES.

24"x10' Putnam, c. r., cross feed.	32"x10' Putnam, c. r., cross feed.
26"x14' Putnam, c. r., cross feed.	70" Sellers d. h. wheel lathe.
28"x14' Putnam, c. r., cross feed.	80" Bement d. h. wheel lathe.

#### PLANERS.

24"x24"x6' Gray, single head.	40"x40"x12' Putnam, single head.
32"x32"x8' Pond, 2 heads.	72"x72"x8' Sellers, 3 heads.

#### RADIAL DRILLS.

5' Dresses, tapping.	7' Baush, tapping.
6' Bickford, tapping.	8' Pond, tapping.

### FOR SALE BY

Federal Machinery Sales Co., 8 N. Jefferson St., Chicago, Ill.

#### BORING MILL.

34" Bullard boring mill, geared feed.

#### UPRIGHT DRILLS.

2-spindle Henry & Wright high speed ball-bearing drill.

3-spindle Henry & Wright high speed ball-bearing drill.

4-spindle Kern high speed ball bearing drill.

5-spindle Fay & Scott high speed ball bearing sensitive drill.

#### GEAR CUTTERS AND HOBBING MACHINES.

Grant-Lees 14" gear hobbing machine, with full set of change gears.

24" Gould & Eberhardt spur and bevel gear cutter.

#### GRINDERS.

3" Diamond-Gorton double disc grinder, with two 18" steel discs.

Eames twist drill grinder, tight and loose pulley countershaft attached.

Le Blond universal cutter and tool grinder.

#### HAMMER.

125 lb. Bradley compact cushion hammer.

#### KEYSEATERS.

No. 1 Davis keyseater, with countershaft.

No. 2 Davis keyseater, with countershaft.

#### LATHES.

15"x 8' Barnes screw cutting, hollow spindle.

16"x 8' Shepard, hollow spindle, compound rest.

17"x10' Lodge & Davis, 4-step cone, hollow spindle.

20"x10' Reed engine lathe, 4-step cone, compound rest.

24" Streit pulley lathe complete.

30"x14' raised to swing 34" Fay & Scott engine lathe.

#### MILLING MACHINES.

Hall & Brown plain miller.

Slightly used No. 14 Garvin plain miller, with countershaft.

#### PLANERS.

18"x18"x40" Putnam, one head on cross rail.

30"x30"x8" Whitcomb, one head on cross rail.

36"x36"x16' Niles, four heads.

48"x48"x16' Sellers, four heads, all power feeds, spiral worm drive.

#### PRESSES.

No. 1 Rockford inclinable, open back.

No. 4 American Can motor driven geared punch press.

#### AUTOMATIC SCREW MACHINES.

No. 2 Brown & Sharpe automatics,  $\frac{1}{2}$ " capacity, excellent condition, (5).

1" Cleveland automatics, excellent condition, (3).

## SECOND-HAND MACHINERY

### FOR SALE BY

#### **Clark Machinery Co.,**

Blower, No 1 Root, positive pressure  
Compressor, 10x12 Chicago.  
Grinder, disc, No. 8 Besly.  
Keyseater, No. 6 Mitts & Merrill.  
Lathe, 48"x24" Enterprise, c. r.  
Lathe, 16"x26" Pratt & Whitney, with  
taper attachment and turret.

#### **1302 Ontario Ave., Cleveland, O.**

Lathe, double head key lathe.  
Miller, No. 2 B. & S. universal.  
Miller, double end valve.  
Miller, vertical, table 22 $\frac{1}{2}$ x5 $\frac{1}{2}$ .  
Magnetic separator, No. 1 Ding.  
Screw machine, 2 $\frac{1}{2}$ " Cleveland auto.

### FOR SALE BY

#### **Western Machinery Co.,**

#### **12 West Third Street, Cincinnati, O.**

LATHES,  
24"x16" Schumacher & Boye ..... \$700.  
15"x5 $\frac{1}{2}$ " Sebastian gap ..... 140.  
14"x 6" Bogart, taper ..... 225.  
12" Shepard (new) q. c. g. (7) ... 175.

#### DRILLING MACHINES.

20" drill presses, (3) ..... \$ 25.  
Blower, No. 6 Sturtevant ..... 5.  
Electric drills, 110 and 220 v. .... 20.  
Motor, 2 h. p., 220 v., d.c. \$87.50  
Motor, 5 h. p., 220 v., d.c. (new) 100.

16"x 6' Lodge & Shipley, q. c. g., \$300.  
8"x5" Barnes ..... 75.  
10" Shepard (new) q. c. g. (4) ... 155.

#### MISCELLANEOUS.

Pipe machines, 4", \$35. 6", \$75. 8", \$125.  
Saw, power, Kwick-Kut, heavy, 50.  
Shaper, 12" Steptoe traverse... 165.  
Shaper, 24" Barker, (new) ..... 375.

### FOR SALE BY

#### **Strong & Hery Co.,**

#### **210 State St., Rochester, N. Y.**

In stock for immediate delivery:

#### LATHES.

20"x10" Hamilton, new, (2).  
16"-24"x8" Sebastian gap lathe.  
13"x6" Barnes.

9" Porter Cable mfg. lathe, new.  
16"x6" Canedy-Otto, new.  
16"x6" Hamilton, new, (2).

#### BENCH LATHES.

A variety of new and used bench lathes with collets.

#### BENCH MILLER.

B. C. Ames, new.

#### PROFILER.

No. 14 Garvin.

#### HAND MILLING MACHINES.

No. 2 Garvin, new.

No. 1 Standard, new.

16x48 Bement slab miller.

#### SLAB MILLER.

9" Lea-Simplex, with saw grinder, new.

#### COLD SAW.

4-spindle Barr.

#### DRILL PRESSES.

16" G. & E. plain.

3-spindle Avey.

#### SCREW MACHINES.

No. 2 B. & O., new, (2).

No. 2 $\frac{1}{2}$  Garvin, new.

1" Pierce, new.

No. 4 Foster.

1 $\frac{1}{2}$ " B. & O., new, (2).

#### MILLING MACHINES.

No. 1 Van Norman plain, like new.

#### DISC GRINDERS.

No. 6-X 20" ring Diamond disc grinders, with compound table, micrometer adjustment, (2).

No. 6-X 14" ring Diamond grinder, with table, same as above, (2).

#### GRINDERS.

No. 1 cutter and reamer grinders, new, (2).

## SECOND-HAND MACHINERY

### FOR SALE BY

**Central Brass Mfg. Co., 4068-4106 Princeton Ave., Chicago, Ill.**  
AUTOMATICS.

Three 1" Cleveland automatics in good working order.

### FOR SALE BY

**Chas. Molitor Machinery Co., 215-221 S. Clinton St., Chicago, Ill.**

#### LATHES.

12"x6' Davis, quick change, taper, draw collets.	22"x10' Economic.
16"x6' Reed.	22"x14' Fifield.
20"x10' Whitcomb-Blaidsell.	32"x16' Putnam, (2).
24"x10' Pond.	52"x16' New Haven.
30"x 8' Fitchburg.	20" Steptoe, geared.
20"x 6' Wheeler.	18" Barker.

#### PLANERS AND SHAPERS.

30"x 8' Fitchburg.	20" Steptoe, geared.
20"x 6' Wheeler.	18" Barker.

#### MILLING MACHINES.

No. 3 Garvin, universal.	No. 2 Kempsmith.
No. 4 Garvin.	No. 9 Kempsmith.

#### DRILL PRESSES.

22" Rockford, sliding head.	36" Grant universal.
31" Gould & Eberhardt.	Baker Bros. boring mill.

#### SCREW MACHINES.

1" Pratt & Whitney, (2).	16" Windsor, turret.
--------------------------	----------------------

#### MISCELLANEOUS.

Power roller, 6"x10".	Drill chks., 9-32" Russell, 1,000, new.
1" Upsetting & forging mch., (3).	Large stock iron, brass, tinner's machinery, etc.

### FOR SALE BY

**E. L. Easley Machinery Co., 551-557 Washington Blvd., Chicago, Ill.**

#### LATHES.

18-22"x10' Milwaukee double back geared engine lathes, heavy, well-constructed tools. Write for descriptive matter. (New).	
12-24"x10' Rahn-Larmon quick change gear engine lathes, 3-step conc, double back geared. Write for quotation. (New).	
24"x10' American high duty engine lathe, double back geared, quick change gear, like new.	

#### GRINDERS.

18" No. 7 Besly, double disc.	Twist drill, 2 1/2" (3).
24" Leland-F., double wet tool, (2).	6-sp. Milwaukee cock grinder.

#### SCREW MACHINES.

1 1/2"x9" Acme.	1" No. 2 B. & S. semi auto.
1" Cleveland automatics, (2).	1" Dresses, hand, f. g. hd.

#### MISCELLANEOUS.

Blowers, various sizes, (6).	Planer, 24"x24"x8' Pond.
Boring mills, 30" Colburn, 1 head.	Planer, 36"x36"x10' Ohio, 2 heads.
Boring mills, 42" Gisholt, 2 heads.	Press, No. 34 Bliss cam drawing, wt. about 11,000 lbs., fine shape.
Borer, cylinder, Moline 2 spindle.	Press, No. 76 Consolidated open back geared, wt. about 13,000 lbs., good condition.
Bolt cutter, 18" Acme, double head.	Press, No. 65 Consolidated straight sided geared, wt. about 6,200 lbs., good shape.
Drill press, 32" G. & E., b. g. & p.f.	Pulley lathe, 24" Streit.
Drill press, 24" Mechanics. s. h.	Riveter, 1" Shuster, Adt model.
Forming roll, power, 98" Bertsch.	Sprocket turning and boring machine combined, Baker Bros.
Gear cutter, 48" Brainerd, spur.	Sprue cutter, 10" Adt. power.
Keyseater, No. 1 Knowles horiz.	
Miller, No. 1 B. & S.	
Millers, valve, for brass, (2).	
Oil separator, No. 1 American.	
Pipe machine, 2" No. 2 Bignall & K.	
Planer, 48"x48"x14' Pond, 1 head.	
Planer, 24"x24"x8' Pond.	

## SECOND-HAND MACHINERY

### FOR SALE BY

#### **Peninsular Machinery Co.,**

Counterhaft, 1 15-16" with 18x5 t. & l.  
 Chuck, 24" 4-jaw. Ind.  
 Drill, 14" single spindle sensitive.  
 Drill, 12" Barr sensitive.  
 Drill, 4-spindle Bickford.  
 Drill, 14" Allen sensitive.  
 Drilling head, 2-spindle, 3" to 8".  
 Flexible shaft, with c. s., Stow.  
 Forming roll, 14 ga. 48" long.  
 Grinder, emery, No. 3 Blount.  
 Grinder, cutter, No. 1 Garvin.  
 Grinder, cutter and tool, LeBlond.  
 Grinder, twist drill, New Yankee.  
 Groover, No. 3 Niagara.  
 Hack saw, No. 11 Millers Falls.  
 Key lathe, 12" Cobb, double end.

#### **110 Beaubien St., Detroit, Mich.**

Lathe, 16x6 LeBlond, engine.  
 Lathe, 14x5 LeBlond, rapid prod't'n.  
 Lathe, 20x8 LeBlond.  
 Miller, hand, No. 1 Whitney type.  
 Press, No. 3 Model A Perkins, pl.  
 Press, No. 33E Michigan, geared.  
 Straightening press, No. 3A Geier.  
 Screw machine, plain, No. 0 Foster.  
 Screw machine, plain, No. 1 Foster.  
 Screw machine, grd., No. 5 Foster.  
 Screw machine, grd., No. 10 Foster.  
 Screw machine, grd., No. 8 Foster.  
 Screw machine, plain, No. 3 Foster.  
 Speed lathe, 11"x4' Blount.  
 Speed lathe, 13"x5' Blount.  
 Speed lathe, 16"x6' Blount.

### FOR SALE BY

#### **Niles-Bement-Pond Company,** . . . . . **111 Broadway, New York.** **Located at Chicago, Boston and New York.**

##### LATHES.

12"x 5' speed lathe.  
 15"x 7' P. & W. speed lathe.

##### AUTOMATIC SCREW MACHINES.

8" Acme old style 4-sp. automatic.

##### BORING AND DRILLING MACHINES.

3" spindle Pond horizontal boring  
and drilling machine.

16"x8' Von Wyck, q. c.

8" Spencer single turret, auto.

36" Brown & Sharpe turret borer.

##### SHAPERS.

10" Miles old-style shaper.  
 12" Bement old-style shaper.

24" G. & E. shaper.

##### PLANERS.

22"x22"x 6' Harrington hd. planer.

42"x42"x20' Miles, 2 heads.

24"x24"x8' Bertram.

48"x48"x20' Sellers, 2 heads.

30"x30"x 6' Niles, 1 head.

##### DRILLING MACHINES.

13" 1 spindle sensitive, 110 v. motor.

14" 3 spindle Henry & Wright.

17" 4 spindle gang, Jones & Lamson.

D-1 Colburn heavy duty drill.

No. 14 Pratt & Whitney multiple, 1" capacity, arranged for 16 spindles.

No. 10 Pratt & Whitney multiple, 1" capacity, 10 spindles.

No. 1 Pawling & H. horizontal, belt drive.

Dallet and Prentice portable drills.

##### RADIALS.

24" Grant, semi-radial.

5' Niles, plain.

24" Bement, plain radial.

6' Niles, semi-universal.

4" Barr, old-style.

##### RAILROAD MACHINERY.

Bement double axle lathe.

Putnam heavy axle lathe.

Niles double axle lathe.

79" Pond dbl. driving wheel lathe.

12x96" Springfield.

##### GRINDERS.

Bolt cutter, 24" National.

Automatic grinder, for saw blades.

Cut-off machine, 44" Starr.

Motor, 80 h. p., 220 v., d. c., North-

ern, 575 r. p. m.

Engine, 500 h. p.

Punch, horizontal, 60" throat, cap.

Engine, 100 h. p.

2" hole in 1", weight 47,000 lbs.,

Engine, 75 h. p.

belt driven,

File sharpener, American.

Rolls, 5"x6" hand power.

Grindstone, 34", iron frame.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Broadway Machinery Co., 236-238 Broadway, Cincinnati, Ohio**

#### LATHES.

30"x10' Fifield, compound rest.	22"x12' New Haven, h. s., c. rest.
16"x6' Porter, h. s., c. rest.	22"x12' Dietz, h. s., c. rest.
20"x10' Silk-Anderson, h. s., c. r.	24"x12' Prentiss, h. s., c. rest.
14"x 5' Lodge & Shipley, q. c., h. s.	28"x14' Prentiss, h. s., c. rest.
	MISCELLANEOUS.
Bolt cutter, 1 $\frac{1}{2}$ " Economic.	Presses, No. 34 Bliss, o. b. inc. (2).
Bolt cutter, 2" Acme.	Punch, No. 3 L. & A., 3" stroke.
Boring mill, 10' Niles, 2 heads.	Punch and shear, No. 8 L. & A.
Miller, No. 9 Bement vertical.	Shaper, 21" Juengst, bk. grd. crank.
Planer, 30x30x7' New Haven, cheap.	Slitting shear, Greenleaf, 25" throat.
Planer, 36x36x10'.	Slotter, 20" Niles, geared.

Send for our New List.

### FOR SALE BY

**A.D. White Machinery Co., - 108-114 N. Jefferson St., Chicago**

#### SCREW MACHINES.

5-16" LaVigne.	1" Cleveland, friction jigger feed.
7-16" Cleveland, friction fd.	1 $\frac{1}{2}$ " LaVigne, (4).
7" Cleveland, friction fd.	2" Hartford.
7" Cleveland, friction fd.	2 $\frac{1}{2}$ " Hartford.
7" Cleveland, jigger feed.	4" Cleveland, semi-automatic.
Hartford, (2).	15-16" Dreses, hand.

#### ENGINE LATHES.

16"x 6' Le Blond.	28"x25' Putnam.
16"x12' Beaman & Smith.	30"x14' Blaisdell.
24"x10' Putnam, (2).	36"x20' New Haven.
28"x12' Fifield.	New lathes, 13 $\frac{1}{2}$ to 18".

#### DRILL PRESSES.

14" Mechanics.	60" Dreses, semi-univ. radial.
20" Barnes.	2 spdl. Rockford.
25" Barnes, sliding head.	2 spdl. Henry & Wright high speed.
28" Bickford, sliding head.	8 spdl. Valley City mult., No. 2 taper.
30" Kerkhoff, sliding head.	10 spindle Pratt & W. multiple.
32" Bickford, sliding head.	12 spdl. Bausch multiple, No. 2 taper.
34" Barnes, sliding head.	PLANERS AND SAWS.

#### PLANERS AND SAWS.

24"x24"x 6' Powell, 1 head.	Bryant cold saw, 19 $\frac{1}{2}$ " dia. saw.
32"x32"x 8' Betts, 1 head.	No. 5 $\frac{1}{2}$ Nutter Barnes cold saw.
35"x35"x12' Niles, 2 heads.	Nutter Barnes saw sharpeners, (2).

#### GRINDING MACHINES.

18" Ransom, disc.	14" Bridgeport floor grinders, (2).
Yankee Style "B", drill.	No. 7 Sterling floor grinder, 2".
3-spdl. valve grinder.	Springfield dbl. wheel, water.
No. 6 Diamond floor grinder.	No. 2 Leland & F. water grinder.
14" Norton floor grinders, (2).	New drill grinders.

#### PUNCH PRESSES.

No. 4 McDonald, o. b.	No. 21 Bliss, o. b. i.
No. 40 Crosby, o. b.	No. 29 Bliss, gang, dbl. action.
No. 45 Crosby, o. b., (3).	150-ton, Sellers 36" hy. wheel press.
No. 4 Leffler, o. b. i.	No. 100 Crosby gang, 30" bet. uprights

#### MISCELLANEOUS.

Bolt cutters, 1 $\frac{1}{2}$ & 3" National, s. hd.	Pipe machine, 2" Jarecki.
Boring machine, Binsse, 3 $\frac{1}{2}$ " bar.	Shaper, 16" Smith & Mills.
Boring mill, 40" Bausch, 2 hds.	Shear, No. 136 Niagara sq., 18 ga.
Boring mill, 42" Dawson, sgl. hd.	Shear, No. 380 Toledo, slitting 16 g.
Hammers, 40 & 60 lb. Bradley, cu. hlv.	Riveter, Shuster, 3".
Keyseaters, Morton port, 18" & 36"	Punch, Wms. & W., 36" throat, 1" cap.
Miller, No. 24 Brown & Sharpe, pl.	Tapper, 6-sp. No. 6 Bement, grd.
Miller, No. 3-B Milwaukee, pl. vert. at.	Tapper, Newton pulley.
Oil gas generator, No. 3 American.	Various blowers.

## SECOND-HAND MACHINERY

### FOR SALE BY

**American Machinery Exchange, Inc., 217 Centre St., New York City**

Chucking machine, 2x26 Jones & Lamson, geared head, bar equipment.

Chucking machines, 3x36 Jones & Lamson, geared head, (2).

Drill, 4-spindle Baker Bros., manufacturers', Style F.

Drill, 5-spindle Foote-Burt, adjustable.

Grinder, universal, No. 2 Oesterlein, all parts.

Milling machine, vertical, No. 3 Becker.

Nut tapping machine, 2" Acme, 4 spindle.

Presses, power, No. 1 V. & O. inclinable, double action, (10).

### FOR SALE BY

**The Randle Machinery Co., 1739 Powers St., Cincinnati, Ohio**

#### LATHES.

All these Lathes have hollow spindle, compound rest, etc.

20"x8' Mueller, l. c. g.	21"x8' Lodge & Davis, l. c. g.
21"x8' Mueller, l. c. g.	21"x14' L. & D., l. c. g., taper att.
21"x6' Reed, l. c. g.	22"x10' Putnam, l. c. g.
24"x14' Bradford, l. c. g., taper att.	22"x10' Reed, l. c. g.
20"x8' Hendey, l. c. g.	20"x10' Silk-Anderson, l. c. g.
20"x8' Hendey, l. c. g., taper att.	28"x18' Lodge & Shipley, q. c. g.
16"x8' Hendey, l. c. g., taper att.	18"x10' Challenge, q. c. g.
16"x6' Hendey, l. c. g.	

#### MISCELLANEOUS.

12" Boring mill, two heads on cross rail.

16" Shaper, crank.

Quick delivery and low prices. We also carry in stock a large assortment of steam engines, boilers and electrical machinery.

### FOR SALE BY

**Herman L. Winterer,**

**908-910 Beach St., Philadelphia, Pa.**

#### LATHES.

29"x26' New Haven, c. r.	19"x10' Fitchburg, b. g., (2).
38"x18' Lodge & Davis, b. g., c. r.	18"x12' New Haven, b. g.
38"x16' Fifield.	18"x12' Walcott, double.
26"x21' Bement, b. g., c. r.	18"x10' Lodge & Shipley, q. c. g.
22"x12' Blaisdell, b. g., c. r.,	18"x8' Blaisdell, b. g., c. r.
21"x14' Blaisdell, b. g.	17"x8' Prentice, c. r.
21"x10' Lodge & Davis, c. r.	17"x6' Cincinnati, q. c. g.
21"x28' LeBlond dbl. combination.	16"x6' Flather, c. r.
20"x8' Flather, c. r.	And many others.

#### TURRET LATHES.

4"x28" Pond.	7"x14" Porter & J., semi-automatic.
2"x18" American back geared chucking lathe.	3"x28" Lodge & S., chucking lathe.
7"x14" Potter & J., semi-automatic.	27" chucking lathe.

#### MISCELLANEOUS.

Bending rolls, 9"x35". d. e.	Keyseater, Burr.
Boiler rolls, 4'6", drop end.	Keyseater, No. 1 Baker.
Boring mill, hor., 48" Beaman & S.	Keyseater, No. 1 Davis.
Boring mill, vertical, 63" Niles,	Keyseater, No. 2 Davis.
double swivel heads.	Keyseater 19"x8" Beaman & Smith.
Centering machine, 4" Whiton.	Keyseater, 18" stroke Morton.
Cylinder boring machine, horizontal,	Planers, 20 to 24" with 5 to 8' bed, (6).
44" bar, Barrett.	Planer, 34"x34"x9" New Haven.
Electric welder, 16" throat, Toledo.	Planer, 40"x40"x27" 6", 4 heads.
Gear cutter, univ., 20" Gould & E.	Saw sharpeners, (4).
Grinder, ring, 8" Heald.	Shear, power, 10' Bertsch.
Hammer, drop, 850 lbs. Waterbury-F.	Slotter, 14", with circular table.

Large assortment of Boilermakers' and General Machinery.

Send for complete list.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Wayne Machinery Co., Taylor St. & L. E. R. R., Fort Wayne, Ind**

Bolt cutter, 1" Acme.  
Bolt cutter, 1" Acme.  
Brake, 8' J. M. Robinson.  
Drill, 23" Springfield, b. g., p. f.  
Drill, 20" Fairbanks, p. f., b. g.  
Drill, 24" Barnes, p. f., b. g.  
Drill, 30" Snyder, p. f., b. g.  
Grinder, No. 1 Woodward & Rogers,  
surface.  
Keyseater, No. 2 Davis.  
Lathe, speed, 10" x 4' Reed.  
Lathe, 20" x 12' Shepard.  
Lathe, 9x45" Rockford engine.

Lathe, 15" x 54" American No. 1, brass.  
Miller, hand, No. 6 Whitney.  
Planer, 12" x 12" x 24" Wilkenson Co.  
Planer, 24x24" x 6" Silk Mch. Tool Co.  
Press, No. 4 Leffler & Co., o. b. i.  
Punch and shear, No. 2 Crosby, sgle.  
Riveter, No. 530 Prouty.  
Riveter, 4" Shuster, rotary blow.  
Screw machine, 16" Pratt & Whitney,  
g. f. h.  
Tire welder, No. 4 L. & A.  
Welding machine, No. 6-A Toledo  
electric butt welder.

New tools for any requirement.

### FOR SALE BY

**New York Machinery Exchange, 50 Church St., New York City**

All in Stock in Jersey City.

#### MILLING MACHINES.

No. 2 Cincinnati, universal.  
Ingersoll, slab, platen 3' x 12', 3 hds.  
76" Newton vert., 48" rotary table.  
Newton duplex slab, platen 18" x 10'.  
Detrick & Harvey milling, drilling  
and boring machine.

No. 1 Pratt & Whitney plain, (2).  
No. 1 Braund, plain, table 13" x 46".  
Garvin plain, Nos. 4½, 4, 3.  
No. 4 Garvin profiler.  
No. 1 Garvin 2 spindle profilers, (2).

#### ENGINE LATHEES.

76" x 22' Pond, blocked to 114", quad-  
ruple geared, face plate drive.  
38" x 12' New Haven, (2).  
36" x 15' New Haven.  
36" x 14' Fifield.  
34" x 16' Perkins.  
32" x 14' Bogert.  
30" x 28' Pond.  
30" x 20' Putnam.  
28" x 16' Fifield.  
28" x 18' Gray.  
26" x 12' Blaisdell.

24" x 12' Blaisdell, (2).  
24" x 10' Reed-Prentice, (2).  
24" x 12' Johnson, (2).  
24" x 10' Hendey, q. c., motor dr., (2).  
24" x 10' Bridgeport, (3).  
22" x 10' Davis, q. c. change gear, (2).  
18" x 10' Greaves-Klusman, q. c. g.  
18" x 8' Shellenbach, geared head.  
17" x 6' LeBlond, taper attachment.  
16" x 6' LeBlond, geared head, sin-  
gle pulley drive, taper att., (2).  
14" x 8' Lodge-ShIPLEY, q. c. g.

#### PUNCHES—SHEARS—ROLLS.

Sellers & Co. double angle shear, capacity 8" x 8" x 1" angles, weight 41,000 lbs.  
Pels & Co. beam shear "T-40."  
No. 3 Hilles & Jones punch & shear.  
Bement punch, 30" throat, capacity 2" in 1".  
8' Lennox rotary splitting shear.  
Long & Allstatter size "D" bar shear, 3½" capacity; weight 30,000 lbs.  
Bass double end punch & shear, 20" throats, capacity 14" in 4".  
Cleveland combined punch & shear, 26" throat, capacity 1 in 1".  
Hains double end punch & shear, 12" and 21" gaps, capacity 1" in 1".  
Cockburn direct acting punch, capacity 1" in 1".  
Bertsch & Co. splitting shear, capacity 4" plates.  
Kling Bros. punch, 24" throat, capacity 14" in 4".  
Cleveland punch, 22" throat, capacity 1" in 1".  
Wilson double end punch & shear, 6" throats, capacity 4" in 4".  
Bement plate shear, 26" throat, 4" capacity.  
Hilles & Jones 12' ship plate rolls.  
Kling 8' boiler plate rolls.

#### MISCELLANEOUS.

Boring mill, vert., 10' Betts, 2 hds.  
Boring head, vert., 8' Betts, 2 hds.  
Boring mill, vert., 66" Betts, 2 hds.  
Boring mill, vert., 36" Niles, 2 hds.  
Boring mill, horiz., Binsse, 3½" bar.

Boring mill, double spindle hori-  
zontal, Newton, 5" spindle.  
Grinder, plain, 12" x 72" Norton.  
Grinders, internal, No. 1½ Landis, (4).  
Grinder, internal, No. 1 Brown & S.

## SECOND-HAND MACHINERY

### FOR SALE BY

<b>Chas. N. Braun.</b>	- - -	<b>1311 E. Lewis St., Fort Wayne, Ind.</b>
Drill press, 36" radial semi-universal, worth \$400, only	.....	\$ 250.
Drill press, 29" Sibley & Ware	.....	55.
Drill press, 10" Whitney, almost new	.....	25.
Lathe, 16"x6' Fifield, h. s., p. c. f., 2 chucks	.....	200.
Lathe, 16"x6' Sebastian, h. s., p. c. f., compound rest	.....	225.
Lathe, new, 13"x6' South Bend	.....	270.
Lathe, new, 16"x8' South Bend	.....	430.
Lathe, new, 17"x8' Sidney, quick change	.....	900.
Lathe, 6-hole turret, 24" Davis	.....	556.
Lathe, 18"x8' compound rest	.....	375.
Miller, Lincoln type, Pratt & Whitney	.....	175.
Miller, universal, Cincinnati No. 2	.....	1200.

### FOR SALE BY

#### **E. S. Cullen Machinery Co., 340 Leader News Bldg., Cleveland, Ohio**

Boring and turning mill, 10' Betts, belt driven; fine condition.  
 Drilling, boring and tapping machine, Pond, horizontal, floor plate 10x12', equipped with out-board bearing, greatest distance spindle to floor plate 90'; excellent condition.  
 Hammer, steam drop, 1500 lb. Bement & Miles, dbl. frame, fine condition.  
 Hydraulic riveting plant, absolutely new, consisting of 96" gap riveter, 10 ton 25' span tower crane, accumulator and pump, 1500 lbs. pressure.  
 Hydraulic riveting plant, used, consisting of 15' locomotive gap riveter, 25 ton tower crane, pump and accumulator; fine condition.  
 Lathe, 50" Fifield, 26' bed, belt driven, triple geared, raising blocks to swing 36", 7 years old; fine condition.  
 Planer, 60" Niles, single head.  
 Planer, 76"x62"x32' Cincinnati, 4 heads, 4 years old, equipped with 30 h. p. reversing motor drive; fine condition.  
 Squaring shear, 12', belt driven, cap. No. 14 gauge steel plate, absolutely new.

### FOR SALE BY

#### **McCoy-Brandt Machinery Company**

#### **Office and Warehouse 216-218 Penn Ave., Pittsburgh, Pa.**

##### Good Used Equipment.

Blower, No. 2 Buffalo.	Motors, 8, 10, 15, 17, 100 h.p., 220v., d.c.
Boring mill, 8' Niles, 2 heads.	Motors, 10 and 55 h.p., 500 v., d. c.
Boring mill, 5' Niles, 2 heads.	Pipe machines, 2, 4, 6, 8, 10 and 12".
Boring mill, No. 5 Barrett horiz.	Planer, pony, 24x6", auto. feed.
Bolt cutter, Morgan, single hd., 1½".	Press, s. s. 4000 lb., auto. roll feed.
Bulldozers, Nos. 1, 2, 3, 4, 12 & 29U.	Press, No. 30 Crosby, o. b. i., 1½" str.
Compressor, 10x12x10", Laidlaw stm.	Presses, No. 19 Bliss equivalent, (4).
Crane, 2-ton, 220 v., d. c., 28' span.	Pump, 7½x4x10" Snow duplex.
Crane, 3½-ton, 220 v. d. c., 27' 9" span.	Pumps, triplex, 6x8", motor drive.
Crane, 3½-ton, 220 v., d. c., 23' 5" span.	Punch & shear, 10" ht. cap. 1½" x 1".
Crane, 3½-ton, 220 v., d. c., 22' 2" span.	Punch, horiz., 10" throat, cap. 1x1".
Crane, 15-ton, 220 v. d. c., 40' span.	Punch & shear (sgl.) 48" cap 4x1".
Drill presses, 20" & 31", sliding hd.	Rolls, bending, 6" cap. 3 16".
Gas engine, 35 h. p., 2 cyl. vertical.	Rolls, straightening H. & J. No 0, 56".
Generators, 3, 224, 75 k.w., 110 v., d. c.	Rolls, angle, cap. 3x3x8".
Generator, 30 k.w., 125v., d.c., st. eng.	Sander, roll, 11" x 44".
Hammer, 50 lb. Modern power.	Shear, rotary bevel, No. 2 Lennox.
Hammer, 300 lb. Johnston & J.	Shear, butterfly, 8" knives.
Hammer, 200 lb. Bradley, helve.	Seamer, Toledo No. 305 (double).
Keyseater, No. 1 Davis.	Steam engine, 14x18', 125 h. p.
Lathe, 24"x14' L. & S., h.s., q.c., c.r.	Surface condenser, 500 sq. ft.
Lathe, 20"x 8' Porter, p. r., s. s.	Testing machine, 200,000 lbs. Riehle.
Lathe, 18"x 8' L. & S., grd.hd., q. c.	Turret lathe, No. 4 H. & J., 8" h. s.
Loco. cranes, 15 & 20 ton, 8 wheel.	Partial List—Inquiries solicited.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### L. F. Seyfert's Sons, Inc., -

Boring mill, 10' J. Morton Poole,  
two heads.  
Cold saw, No. 2 Newton, combination,  
motor drive.  
Drill, radial, 36" Mueller, plain.  
Drill, 26" Barnes, sliding head.  
Drill, 26" Barnes, stationary head.  
Lathe, 26"x12" Davis.  
Miller, No. 2 Owens universal.

#### 437 N. 3rd St., Philadelphia, Pa.

Miller, slab, 24"x24"x6' Ingersoll.  
Planer, 22"x22"x5' Whitcomb, 1 hd.  
Press, No. 4 Willard inclinable.  
Punches and shears, Nos. 1 and 4  
Hilles & Jones single end.  
Shaper, 16" Smith & Mills plain  
crank.  
Shaper, 24" Smith & Mills b. g.  
Tapping machine, 4" Hubbell.

### FOR SALE BY

#### F. H. Kappen & Son, Agents,

Air compressor, 6x6x7, steam drive.  
Blowers, pressure.  
Boilers, stationary.  
Bolt cutter, 1" Wells.  
Cutting-off machines, Burke and  
Burr.  
Drill presses, sensitive.  
Engines, steam and gasoline.  
File sharpener, American.  
Motor, 550 v., d. c., 6 h. p.

#### 93 W. Water St., Milwaukee, Wis.

Lathes, 10x36" Shepard, 9x12 Star,  
24x12 A. & C.  
Press, geared, No. 6 Model H.  
Perkins, 2" stroke.  
Press, geared, No. 6½ Model A.  
Perkins, 4" stroke.  
Press, plain, No. 45 Model E.  
Perkins, 14" stroke.  
Screw mch., 4" Pratt & W., auto.  
Speed lathe, 12x45 Oliver.

### FOR SALE BY

#### The Osborne & Sexton Machinery Co.,

Columbus, Ohio.

#### LATHES AND TURRET LATHES.

12"x 6' Fairbanks, comp. r., h. s.  
13-15-16 and 18 O. & S., h.s., c.r., new.  
14"x 6' Bradford, h. s., c. r.  
14"x 6' Lodge & Shipley, h. s., c. r.  
14"x 6' Blaisdell, taper, (2).  
16"x 6' Blaisdell, overhauled.  
18"x 6' Hamilton, h.s., d.b.g., new (3).  
18"x10' Barker, h. s., comp. rest.  
20"x 8' Hamilton, h.s., d.b.g., new (8).  
20"x10' Putnam, overhauled.  
21"x14' Fifield, comp. rest.

22½"x12' Mueller, h. s., comp. rest.  
22"x10' Hamilton, 3-step, new.  
23"x10' Blaisdell, overhauled.  
24"x16' Dietz, 5" h. s., c. r., taper.  
15"x 6' Fox universal lathe.  
16"x 6' back geared turret.  
18"x 6' Mueller, turret on shears.  
2"x24" Jones & Lamson.  
24" Gisholt, 4" hollow spindle.  
1" Garvin hand screw machine.

#### SHAPERS AND PLANERS.

15" Hendey tool & die shaper.  
16" Steptoe crank shaper.  
20" Smith-Mills crank shaper.  
22" Walcott geared shaper.  
22" Walcott shaper, pr. down fd.

24" Barker crank shaper.  
20"x20"x 4' Industrial.  
30"x30"x10' Ohio, 2 heads, new.  
30"x30"x12' Pond planer.

#### MISCELLANEOUS.

Automatics, 7-16", National (2).  
Broacher, 6½" stroke Waterbury.  
Buffing lathes, all sizes.  
Centering machine, 6" P. & W.  
Cut-off machine, 3" Davis.  
Die miller, No. 1 Thurston.  
Drills, flexible shaft (2).  
Drills, hi-speed, 23-32"-32 tapered.  
Drills, sensitive, 1, 2, 3 and 4 spindle.  
Drill, Avey 3-spindle high speed.  
Drill, 32" sliding head.  
Drill, turret, 6-hole Quint.  
Drill, 7-spindle, adj. centers.  
Gas engines, 4 to 150 h. p.  
Grinder, tool, Gleason.  
Hammer, power, 100 lb. upright.  
Hammer, drop, 750 lb. Toledo.

Miller, Gooley & Edlund, 38" fd  
Miller, univ., Kempsmith No. 2.  
Miller, plain, Garvin No. 3.  
Motors, 2 to 25 h. p., 3 phase, 220 v.  
Pipe machines, 2", (2).  
Press, 124" Ferracute, 78000 lbs.  
Press, 102" Ohl, 24000 lbs.  
Radial drill, 30" Keystone.  
Radial, 5' Universal.  
Riveter, 4" Shuster, 20" throat.  
Rolling mill, 22"x13" Toledo, 16000 lb.  
Shear, squaring, 36" gap, 15" cap.  
Straightening rolls, 30".  
Tapper, vertical, Garvin No. 1.  
Threading mch., Webster & Perks.  
Variable speed transmission, Reeves.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Brownell Machinery Co.,

Cutting-off mch., 3" Hurlbut & R.  
Drill presses. Baker hyd. duty, (2).  
Gear generator, 11" Gleason automatic, double tool.  
Gear generator, 6" Gleason automatic, double tool.  
Gear generators, 12" Gleason, single tool, (2).  
Gear generator, 15" Gleason double tool.  
Gear generator, bevel, 18" Gleason, double tool post.  
Gear cutters, 36" B. & S. auto., (2).  
Gear planer, bevel, 16" Hugo Bilgram, single tool.  
Lathes, eng., 16"x7" Oliver, new, (5).

11-13 Eddy St., Providence, R. I.  
Lathes, engine, 14"x6' Worcester, new, (2).  
Lathe, engine 18"x8' Star, c. rest.  
Lathe, engine, 20"x8' Perkins, pl. r.  
Lathe, engine, 20"x12' Perkins.  
Lathe, turret chucking, 20"x6' Florence.  
Lathe, turret, 22" Libbey, 4" hollow spindle.  
Lathes, turret, 21" Gisholt, (4).  
Milling mch., plain, No. 14 Garvin.  
Milling machine, No. 5 Becker vertical, with rotary.  
Milling machine, No. 2 Becker, vertical, with rotary.  
Planer, 22"x22"x5' Flather.

### Second-Hand Wood-Working Machinery

For a large list of used wood-working machinery, consult the **Wood-Working Machinery List**, a publication similar to this but devoted to the advertising of saw-mill and wood-working machines. A copy may be had on application to the publisher, **A. H. Hitchcock, 1220-1235 Caxton Building, Chicago, Ill.**

## Don't Forget

### The New England Dealer Service Of Purinton & Smith, Hartford

To New England Machinery Users:

Located right in the heart of your territory, we can give you a *prompt personal service* which you cannot secure from more distant markets.

Whether you are looking for new or used machines and tools, or whether you have used machinery to dispose of, take it up with your New England Dealers and see what we can do for you.

*Yours for prompt service,*

**Purinton & Smith, Hartford, Conn.**

# Used Machinery For Immediate Delivery

*In Stock*

## Lathes.

- 1—14"x6' Lodge & Shipley, quick change gear, taper attachment, hollow spdl., compound rest, excellent condition.
- 1—14"x8' Hamilton Style A, hollow spindle, compound rest.
- 1—16"x9' Perkins, compound rest, hollow spindle, good condition.
- 1—18"x12' Perkins, compound rest, hollow spindle, good condition.
- 1—18"x12' New Haven, comp. rest, hollow spdl., raising blocks to swings 30".
- 1—20"x17' J. & L., 12" centers, hol. spdl., cuts threads 3 to 40, either U. S. or Metric, comp. and plain rest, excellent condition, raising blocks to swing 30".
- 1—38"x15' New Haven, 8" centers, taper att., c. rest, sgl. back grd., fine shape.
- 1—72"x28' Putnam, 15" centers, compound rest, q. c. g. feed, triple geared, face plate drive, latest pattern, motor driven, wt. 7500 lbs., good as new.

## Planers.

- 1—24"x24x6' Smith Planer, single head.
- 1—32"x32"x8' Gray Planer, one head, fine shape.
- 1—36"x36"x10' New Haven Planer, one head.
- 1—37"x37"x15' Lane Planer, one head.
- 1—60"x60"x18' Betts Planer, one head on rail and one side head.
- 1—60"x60"x20' Pond Planer, 4 heads, motor driven by 20 h. p. Crocker-Wheeler Motor mounted on top of housing, 220 volt, d. c.

## Drilling Machines.

- 1—20" Rockford Stationary head, back geared, power feed.
- 1—22" Snyder Stationary head, back geared, wheel and lever feed.
- 1—24" Aurora Stationary head, back geared, power feed and auto stop.
- 1—36" Aurora Sliding head, back geared, power feed, auto. stop, good condition.
- 1—42" Baush & Hams Radial, back geared, good condition.

## Grinders.

- 1—No. 1 Bath 10"x24" Universal Tool Room Grinder, complete with all attachments, in nice condition.
- 1—No. 6-A Gorton Double Disc Grinder, 18" discs, complete with countershaft.
- 2—Yankee Twist Drill Grinders, cap. up to 2½" drills, good as new.
- 1—Whitney Wet Tool Grinder, wheels 16"x2."

## Miscellaneous.

- 1—No. 2 Mitts & Merrill Key Seater, complete.
- 1—No. 3 Mitts & Merrill Key Seater, complete.
- 1—12" Slotter, Industrial, compound and circular table.
- 1—16" Steptoe Crank Shaper, back geared.
- 1—15" Pratt & Whitney Crank Shaper, tool room.
- 1—No. 4½ Garvin Plain Milling Machine, table 9"x42".
- 2—Cold Metal Saws about 4" Capacity.
- 1—1½" Acme Bolt Cutter, pump, etc.

We are looking for good used metal working machinery of all descriptions, and especially tools such as Boring Mills, Planers, Radial Drills, Milling Machines, Shapers and Brown & Sharpe Automatics. Let us hear from you at once if you have any used machinery for sale or exchange.

**D. M. Osborne Machinery Co.**

Office: 917 American Trust Bldg.      Warehouse: West 11th & Front Sts.

Cleveland, Ohio

## Milling Machines.

- 1 Thread Miller, 4½x12.
- 1 Thread Miller, 6x14.
- 1 Universal Miller, Brown & Sharpe No. 1.
- 1 Plain Miller, Kempsmith No. 2.
- 1 Plain Miller, No. 14 Garvin.
- 10 Lincoln Millers, F. E. Reed.
- 3 Lincoln Millers, No. 4 Hendey.
- 3 Lincoln Millers, No. 7 B. B.
- 1 Briggs Miller, Type B., large size.
- 4 Hand Millers.
- 2 Oscillating Millers.

## Miscellaneous.

- 8 Arbor Presses, No. 3.
- 2 Drills, 20" Barnes.
- 1 Drill, 24" Cincinnati, with tapping attachment.
- 4 Drills, 32" Cincinnati, with tapping attachment.
- 1 Gear Cutter, 26" Brown & Sharpe No. 3.
- 1 Gear Cutter, 30" G. & E., spur and bevel.
- 3 Lathes, 16"x8' Reed.
- 3 Lathes, 21"x12' Perkins.
- 3 Lathes, 26"x12' Hamilton.
- 10 Screw machines, P. & W. automatic.
- 1 Slotter, 10" New Haven.

**T. Crowther & Company, Inc.**

170 Oliver Street, Boston, Mass.

## ANNOUNCEMENT

We are now prepared to furnish you  
NEW and REBUILT

Lathes

Key Seaters

Drills

Screw Machines

Planers

Punch Presses

Shapers

Shears

Millers

Bolt Cutters

Transmission

Grinders

Motors

Metal Saws

COMPLETE PLANTS A SPECIALTY

Every Machine Guaranteed

*We Buy and Sell. Tell Us Your Wants.*

**CHICAGO ENGINEERING & MACHINERY CO.**

220-224 N. Clinton St., Chicago, Ill.

# Second-Hand Machine Tools

## Gear Machinery.

Norris four spindle semi-automatic bevel gear roughing machine.  
15" Gleason bevel gear generator.

## Boring Machines.

No. 1 Barrett cylinder borer, 3 $\frac{3}{4}$ " bar.  
Barrett type horizontal, 6" bar, 72" table.  
52" Gisholt vertical, one swivel, one turret head, quick power  
traverse.

## Engine Lathes.

14" Hendey tool room, with draw chuck, taper, etc., good as new.  
14"x 6' Porter, compound rest.  
16"x 6' Reed, compound rest.  
16"x 8' Walcott, compound rest.  
20"x 10' Flather, with chuck.  
26"x 13' Pond, compound rest.

## Presses.

Upright power punch press, 3" stroke, 3 7-16" columns, 18" bet.  
openings.  
Straight sided power punch press, 1 $\frac{1}{2}$ " stroke, takes in 20".

## Turret Lathes and Screw Machines.

Gridley automatic piston machine.  
No. 3 National-Acme four spindle automatic.

## Shapers.

14" Springfield plain crank.  
18" Springfield plain crank.  
24" Smith & Mills geared, shifting belt.

## Miscellaneous.

American oil separator.  
1 $\frac{1}{2}$ " Economic bolt cutter fitted with Landis head, (new).

**Marshall & Huschart Machinery Co.**

17 S. Jefferson St.  
Chicago, Ill.

915 Chemical Building  
St. Louis, Mo.

## Some Lathes

No. 79—22"x16' 5-Step Cone Head, with 2 headstocks and 2 tailstocks on one bed.

### OTHER MACHINES

No. B—36"x36"x12' Niles Single Head Planer.

No. 229—30"x30"x10' Cincinnati Double Head Planer.

No. 234—30"x30"x10' Cincinnati Single Head Planer.

No. 1337—Crompton - Knowles Loom Works Keyseater, 60" stroke, 48" swing.

No. 661—Globe Tool Sharpener for  $\frac{1}{2}$ "x6".

No. 680—Safety Tool Grinder 4"x32" emery wheel.

No. 1379—Universal Swivel Table for radial drill.

No. 87—24"x12'(Single Pulley).

No. 881—30"x10' 5-Step Cone Head Lathe.

No. 690—Marion Buffing Mch.

No. 000—6" Hersey Rotary Water Meter.

No. 1336—No. 00 Sturt. Blower.

No. 2331—Sturtevant 24" outlet.

No. 2033—Commercial Electric D. C. 40 k. w. 110 volt Generator, compound wound.

1—15 h. p. Gas Engine, 215 rpm.

No. 1690—Rockford Straightening Mch., 6"x24" with c. s.

No. 702—No. 24 Safety Tool Grinder.

No. 1346—No. 4 D. E. Whitton Centering Mch. 6" bed.

### USED MOTORS

1— $\frac{1}{2}$  h. p. Triumph Electric d. c., 110 volt, 1100 r. p. m.

1— $\frac{1}{2}$  h. p. 220 volt, d. c., 1150 r. p. m. Reliance Motor.

1— $\frac{1}{2}$  h. p. Bullock, 220 volt, d. c., 600 r. p. m.

1— $\frac{1}{2}$  h. p. Western Electric, 110 or 220 volt.

1— $\frac{1}{2}$  h. p. Northern, 220 v., d. c., variable speed, 365 to 1100 r. p. m.

40—Chucks of all sizes.

The Lodge & Shipley Mch. Tool Co., Cincinnati, Ohio,  
U. S. A.

### LATHES.

13"x5' Blaisdell.

14"x6' Von Wyck.

14"x6' Prentice, q. c. g.

14"x6' LeBlond, geared head, motor drive.

14"x6' Reed.

16"x6' Lodge & Shipley, q. c. g.

16"x6' Blaisdell.

20"x8' Reed.

26"x12' Reed.

30"x10' Fifield, triple geared.

### TURRET LATHES.

3"x36" P. & W. chucking, power feed.

18" D. & E., geared friction head.

2"x24" J. & L.; bar equipment.

### SCREW MACHINES.

Two No. 55 National-Acme Automatics.

Two 2 $\frac{1}{4}$ " Gridley, single spindle.

No. 1 $\frac{1}{2}$  Pratt & Whitney, geared friction head, p. f. to the turret.

### GRINDERS.

No. 3 B. & S. universal.

10"x50" Norton plain.

No. 2 Norton tool room.

### RADIAL DRILL.

5' Dresses plain.

6' Dresses plain.

**Chandler & Farquhar Company**

419-425 Atlantic Ave.,

Boston, Mass.

# First Class Used Machine Tools

## Engine Lathes.

9"x36" W. P. Davis.	19"x10' Lodge & Davis.
14"x 6' Carroll-Jamieson, q.c., new.	20"x14' Rahn-Carpenter, gap.
16"x 6' Canedy-Otto, new.	25"x10' LeBlond, hyv. duty, turret.
18"x 8' Lodge & Shipley, q. c.	28-40"x10' Fay & Scott.
18"x 8' Lodge & Barker.	30"x12' Blaisdell.
18"x10' Rahn-Carpenter.	36"x16' Hamilton.
18"x12' Draper.	36"x13' New Haven.

## Screw Machines and Turret Lathes.

No. 2½ Pratt & Whitney.	21" Universal.
No. 4½ Bardons & Oliver.	21" Gisholt.
2" American.	24" Morse.
3"x36" Pratt & Whitney.	

## Drill Presses.

25" Barnes, stationary head.	3' Fosdick, plain radial.
28" Barnes, sliding head.	3½' Morris, plain radial.
28" Cincinnati, sliding hd. (tapper).	4' Bickford, semi radial.
30" Cincinnati, sliding hd. (tapper).	

## Shapers.

12" Perkins, belt.	15" Potter & Johnston, new.
20" Hendey, belt.	16" Queen City, new.
24" Gould & Eberhardt, crank.	

## Planers.

26"x26"x 6' Flather.	42"x36"x14' Cincinnati.
32"x32"x8' New Haven.	

## Milling Machines.

No. 1 Clough, vertical.	No. 14½ Brainard, universal.
6"x48" Pratt & W. thread miller.	

## Keyseaters.

No. 00 Baker Bros.	No. 3 Mitts & Merrill.
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## Boring Mills.

No. 1 Barnes, horizontal.	No. 1 Franklin, tool room.
No. 3½ Binsse, horizontal.	3½" bar Bement, horizontal.
2½" bar Newark, horizontal.	

## Punch Presses.

No. 12 Wold, inclined.	No. 3 Bliss, solid back.
No. 40 Wold, inclined.	No. 69-N Bliss, double acting.
No. 119 Crosby, open bk. inclinable.	No. 5 Stiles pattern, geared.
No. 21 Consolidated horning.	

## Miscellaneous.

Axle lathe, Niles.	Riveter, 1" Shuster.
Bending roll, 12".	Riveter, 1" Cincinnati.
Bolt cutter, 1½" Acme.	Screw press, 1½" Stiles.
Bulldozer, No. 4 Williams & White.	Slotter, 16" Niles.
Cold saw, Espen-Lucas.	Squaring shear, 52" Niagara.
Pipe machine, 6" Bignal & Keeler.	

## Wood Working Machines.

Band saw, 36" Fay & Egan.	Mortising machines, vertical.
Jointer, 8" Porter.	Sander, 48" Invincible.

**Rumely-Wachs Machinery Co.**

117-121 N. Jefferson St., Chicago, Ill.

*"New York's Greatest Clearing House—New York's Lowest Prices—J. J. McCabe"*

We search out the true values of Used Tools for the benefit of big and little shops who realize the importance of good Tools, and the wisdom of avoiding "taking chances."

# "Reliability"

is the claim that keeps McCabe's Tools before your attention—

## UPRIGHT BORING MILLS

16" swing, heavy, standard modern style, 2 heads, Niles Tool Works, motor driven, still set up.  
90" Swing, heavy, double head, Betts Machine Co.,  
86" Swing, hvy., dbl. hd., Niles Tool Wks.  
74" Swing, hvy., dbl. hd., Niles Tool Wks.  
60" Swing, standard, double head, Niles Tool Works.  
42" Swing, heavy, double head, Bullard Machine Tool Co.  
38" Swing, hvy., dbl. hd., Niles Tool Wks.  
37" Swing, heavy, double head, Bullard Machine Tool Co.

## LATHES Back-Geared

36" Swing, 16' bed, Putnam Machine Co.,  
36" Swing, 8' bed, Pond.  
32" Swing, 30' bed, Pittsburgh, dbl. bk. grs.  
32" Swing, 28' bed, Putnam style.  
30" Swing, 14' bed, Bement-Miles heavy.  
30" Swing, 12' bed, Fitchburg.  
28" Swing, 30' bed, Pond style, taper.  
28" Swing, 14' bed, Fitchburg.  
26" Swing, 10' bed, Pond.

## PLANERS Small Sizes

32" x 32" x 8' one head, Pond.  
30" x 30" x 12' two heads, G. A. Gray Co.  
30" x 30" x 8' one head, Wm. Sellers & Co.  
26" x 26" x 6' one head, Pratt & Whitney.

## ROTARY PLANERS

No. 2 Cleveland, 50" cutter head, 6' travel, with bed pl. 3 x 6'.  
Newton, 48" cutter head, bed 18' long, with extra bed plate, still set up.

## SLOTTERS

9" Stroke, Bement.  
10" Stroke, Wm. Sellers & Co.  
12" Stroke, Putnam Machine Co., Bement.  
12" Stroke, Betts Machine Co.  
12" Stroke, T. C. Dill Machine Co.  
16" Stroke, Betts Machine Co.  
18" Stroke, Bement-Sibles.

## HORIZONTAL BORING AND DRILLING MACHINES

54" Bar, Knee type, swings 80° x 30°

## HORIZONTAL BORING AND DRILLING MACHINES

3½" Bar, "knee type" 42" feed, 60" between, Newark.

## RADIAL DRILLS

One (1) 7' arm, heavy pattern, Pond Machine Tool Co., One (1) 6' arm, heavy pattern Niles, motor driven, fan shape base, outer arm support, One (1) 6' arm, heavy pattern, Bickford, fan base, outer support. Two (2) 6' arm, hvy pat., Dresses speed-box, One (1) 4' arm, heavy pattern, Bickford, speed-box.

## MULTIPLE DRILLS

18-sp., belt driven, Baush Mch. Tool Co., 16-spindle, equipped for motor drive, no motor, Baush Mch. Tool Co., wt. 20,000 lbs., 4-spindle, gang style, table 6' in length, Niles Tool Works, wt. 10,000 lbs.

## UPRIGHT DRILLS

36" Sw., Prinice Bros., sliding hd., bk. grs., 32" Sw., Prinice Bros., sliding hd., bk. grs., 22" Sw., Laker, high-speed for drilling, boring and tapping.

## LATHES Triple-Geared

62" Swing, 24' bed, New Haven Mfg. Co., 60" Swins, 20' bed, Niles Tool Works, 56" swing, 28' bed, Putnam Machine Co., 48" Swings, 16' bed, Pond style, raise blocks to 80", 42" swing, 20' bed, heavy, Pond Machine Tool Co., 24-40" Swing, 12' bed, McCabe dbl. spdl.

New lathes 16, 18, 21" swing, 6 and 8' beds, 3-cone double back gears.  
New McCabe double spindle lathes, 26-48" swing, 12' 18 and 20' beds.

## TURRET LATHE

24" Swing, rapid reverse to turret, 24" hole Gisholt, 21" Swing, Gay style, 30" in gap, Gisholt, 2-20" Swing, full-automatic, 2" hole, Porter & Johnston, 22" Swing, turret screw machine, 24" hole, Garvin No. 13, 1 15-16" thru wire led.

## TIRE LATHE

42" Swing, double head, for cutting both wheels at one operation, "open center" type, Niles Tool Works.

## MILLING MACHINES—Plain

Heavy, table 60" x 14" all auto. feeds, No. 34 Garvin, table 36" x 12" Ten Lincoln type, table 27" x 12" Pratt & W.

## Planer Type

30" x 30" x 12" Ingersoll, horiz. & vert. spdl., 36" x 30" x 5' Newton, horiz. and vert. spdl., 36" x 22" x 8' Newton, horiz. spindles only, 24" x 24" x 14" Ingersoll, horizontal spindles, 24" x 24" x 6' Ingersoll, horizontal spindles, 22" x 22" x 11' Newton, horizontal spindles.

## PLANERS Large Sizes

72" x 72" x 8' three hds., Wm. Sellers & Co., 67" x 67" x 10' three hds., Wm. Sellers & Co., 62" x 62" x 28' two heads, Bettis Machine Co., 42" x 12" x 12" two heads, Pond Mch. Tool Co., 36" x 36" x 12" three hds., Wm. Sellers & Co., 36" x 36" x 12" two heads, G. A. Gray Co., 36" x 36" x 8' four heads, Wm. Sellers & Co., 36" x 36" x 8' two heads, Pond Mch. Tool Co.

12" Stroke, Putnam Machine Co., 12" Stroke, Benten.

12" Stroke, Bettis Machine Co., 15" Stroke, T. C. Bill Machine Co., 16" Stroke, Bettis Machine Co., 18" Stroke, Benten-Miles.

## STEAM HAMMERS

3-600 lb. Morgan, double frame, 1-700 lb. Benten-Miles, double frame, 1-900 lb. Morgan, double frame, 2-1000 lb. Morgan, double frame, 1-1200 lb. Morgan, double frame, 1-2000 lb. Morgan-Williams, dbl. frame, 1-5000 lb. Morgan-Williams, dbl. frame, 1-10,000 lb. Benten-Miles, double frame.

## PUNCHES AND SHEARS

24" Throat, with punches, heavy, 30" Throat, rotary splitting shears, 48" Throat, Cleveland, with shear blades and angle blocks, 48" Throat, Long & Allstatter, with splitting shears, 60" Throat, Long & Allstatter, capacity 2" hole thru 1½", shear 24" round.

## SHAPERS

26" Stroke, Hendey Co., 12" Stroke, travelling head Sellers, 36" Stroke, Newark.

## BOLT CUTTERS

2½" Acme, single head, 1½" Acme, double head, 1½" Putnam, single head.

## MISCELLANEOUS

No. 2 Baker key-seater, 20" stroke, Gear cutter, 36" spur and bevel, G. & E. Gear cutter, 36" spur, Newark. Double end cutting-off and centering machine, 9" capacity, Niles, No. 20 Bliss press, Cold saw, 5" round, Lea-Simplex, Gas engine, 15 h. p. Fairbanks-Morse.

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### LATHES.

- 1—60"x16' Fitchburg.
- 1—46"x18' New Haven.
- 1—42"x12' Putnam.
- 1—40"x16' Gleason.
- 1—31"x24' Bradford.
- 1—31"x12' Bradford.
- 1—28"x17' New Haven.
- 1—26"x12' American.
- 1—26"x12' Davis.
- 1—25"x26' American.
- 1—25"x14' Bradford.
- 1—25"x10' Greaves & Klusman.
- 1—24"x14' Blaisdell.
- 1—24"x12' New Haven.
- 1—24"x12' Draper.
- 1—24"x10' New Haven.
- 1—24"x10' Draper.
- 1—23"x12' Greaves & Klusman.
- 1—22"x16' Flather.
- 1—22"x10' Whitcomb-Blaisdell.
- 1—22"x10' American.
- 1—22"x10' Schumacher & Boye.
- 1—22"x8' Flather.
- 1—21"x16' Le Blond.
- 1—21"x14' Flather.
- 1—21"x12' Le Blond.
- 1—21"x12' Bradford.
- 1—20"x12' Draper.
- 1—20"x12' Flather.
- 2—20"x10' American.
- 1—20"x8' American.
- 1—20"x6' Lodge & Shipley.
- 1—19"x12' Lodge & Davis.
- 1—19"x10' Rahn.
- 1—19"x8' Rahn.
- 1—18"x8' New Haven.
- 1—18"x12' Champion.
- 2—18"x10' Draper.
- 2—18"x10' Bradford.

### PLANERS.

- 2—87"x46"x18' Woodward & Powell.
- 1—87"x46"x10' Woodward & Powell.
- 3—76"x48"x18' Woodward & Powell.
- 1—48"x36"x 8' Woodward & Powell.
- 1—42"x42"x14' Woodward & Powell.
- 1—36"x36"x17' Powell.
- 1—36"x36"x10' Gray.
- 1—36"x36"x 8' Woodward & Powell.
- 1—33"x33"x 8' Ohio.
- 1—30"x30"x 8' Powell.
- 1—30"x30"x 6' Pease.
- 1—27"x27"x 7' Flather.
- 2—27"x27"x 6' Ohio.
- 1—26"x26"x 7' Gray.
- 1—24"x24"x 6' Gray.
- 1—24"x24"x 6' Pond.
- 2—24"x24"x 6' American.
- 1—22"x22"x 6' American.
- 1—22"x22"x 5' Gray.

### LINCOLN MILLERS.

- 1—No. 7 Becker.
- 1—No. 5 Hendey.
- 1—Garvin Duplex.
- 4—No. 13 Pratt & Whitney.
- 6—No. 12 Pratt & Whitney.
- 4—No. 2 Pratt & Whitney.
- 2—No. 7 Brainard.
- 1—No. 2 Carter & Hakes.

### MISCELLANEOUS.

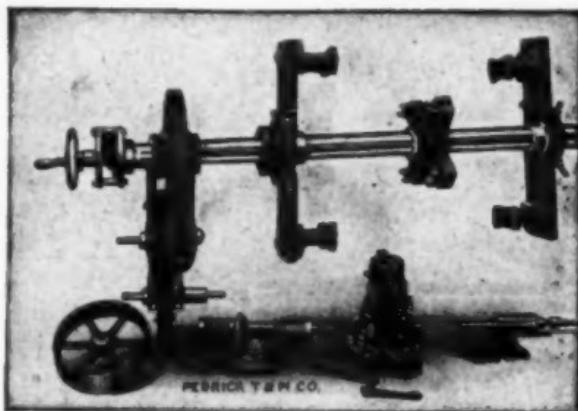
- 1—No. 3 Lapointe Broaching mch.
- 1—No. 2 Lapointe Broaching mche.
- 1—100 lb. Bradley Hammer.
- 1—40 lb. Bradley Hammer.
- 1—Mitts & Merrill Shaft Keyseater.
- 1—No. 60 Heald Cylinder Grinder.
- 1—No. 210 Heald Ring Grinder.
- 1—No. 5 Bath Duplex Int. Grinder.
- 1—No. 79 Bliss Geared Press.
- 1—No. 73-D Ferracute Press.
- 1—No. 57 Adriance Press, Geared.

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